**EAD
DYOGM**

DYNAMIQUE DES ORGANISATIONS,
DE GESTION ET DE MANAGEMENT

ENSEMBLE DES TRAVAUX
EN VUE DE L'OBTENTION DU DIPLÔME D' HABILITATION A DIRIGER DES RECHERCHES
(HDR)

SPECIALITE : GESTION

ANNEXES

LE SYSTEME MANAGERIAL DE LA FORMATION OUVERTE ET A DISTANCE : RISQUES ET QUALITE

Présenté par :

RAKOTOMAHENINA Pierre Benjamin

Maître de Conférences

Membres du Jury :

— Monsieur SOLOFOMIARANA RAPANOEL Bruno Allain, Professeur, Président
— Monsieur RALAINONY Jacques Ramambazafy, Professeur Titulaire Émérite, Rapporteur Externe
— Monsieur ETIENNE STEFANO Raherimalala, Professeur, Rapporteur Interne
— Monsieur RAZAFINDRAVONONA Jean, Professeur, Examinateur
— Madame RANDRIAMBOLOLONDRABARY Corinne, Maître de Conférences HDR, Examinateur
— Madame ANDRIANALY Saholiarimanana, Professeur Titulaire, Garant Scientifique

Date de soutenance : 14 Juillet 2021

Année Universitaire : 2019/2020

ANNEXE N°1 :
CURRICULUM VITAE

1. ETAT CIVIL

Nom : RAKOTOMAHENINA
Prénom : Pierre Benjamin
Date de naissance : 7 Août 1975 (46 ans)
Situation familiale : Marié, Père d'une fille et d'un garçon
Nationalité : Malagasy
Carte d'Identité Nationale N° : 101 251 089 327 du 13 avril 1994 à Antananarivo V
Addressee: Lot II B 408 Andoharanofotsy – Antananarivo (102)
Téléphone : +261 34 14 482 30
Courriel : netinfomanagement@yahoo.fr

2. PRINCIPALES QUALIFICATIONS

— Spécialiste en Gestion : Finances et comptabilité, Management de projet
— Ayant des expériences probantes en conduite de formation ouverte et à distance ;
— Bonne capacité de conception et de gestion de projet;
— Bonne connaissance sur la gestion des risques en management;

3. FORMATIONS, DIPLOMES ET LANGUES

CURSUS UNIVERSITAIRE

Mentions : Gestion et Economie - Faculté d'Economie, de Gestion et de Sociologie (E.G.S) de l'Université d'Antananarivo

2011	**Doctorat** en Gestion
2004	**DEA** en Gestion
1999	**Maîtrise** en Gestion
1998	**Licence** en Gestion
1997	**DEUG**
1994	**Baccalauréat** série D à Antananarivo

FORMATIONS MODULAIRES ET DE PERFECTIONNEMENT

Ecole Supérieure Agronomique- Université d'Antananarivo avec la Fondation Mac Arthur et l'IFS (International Foundation of Science) Genève

2002   Formation intensive : Développement Rural

        Formation : Conduite de projet de recherche

Université d'Antananarivo et Coopération Française (Projet SIST)

2007   Formation : Rédaction des articles scientifiques

English Language Institute (ELI) – Antananarivo

1997   Certificat : Communication en Anglais

CONNAISSANCE LINGUISTIQUE

		Lue	**Ecrite**	**Parlée**
Langue maternelle	Malagasy	Excellente	Excellente	Excellente
Langues d'études	Français	Très Bien	Très Bien	Très Bien
	Anglais	Bien	Bien	Bien

4. PUBLICATIONS

4.1 Liste des Publications des articles scientifiques

4.1.1 Communication scientifique à l'Académie Malagasy

[1] **Rakotomahenina Pierre Benjamin**, « La formation ouverte et à distance, un dispositif de développement de l'enseignement supérieur à Madagascar », Université d'Antananarivo et Akademia Malagasy, décembre 2017.

4.1.2 Articles dans des revues internationales

[2] Andriamasimanana Origène Olivier and **Rakotomahenina Pierre Benjamin**, "Opportunistic Behaviour and Shareholding of Company Directors", *International Journal of Recent Scientific Research*, 2020/11 (Vol. 5), ISSN: 0978-3031, p. 38377-38382. DOI: http://dx.doi.org/10.24327/ijrsr.2020.1105.5298.

[3] **Rakotomahenina Pierre Benjamin** and Andriamasimanana Olivier Origène, « The system of cooperation of actors in open and distance learning », *International Journal of Engineering Technologies and Management Research*, 2020/7 (Vol.8), ISSN: 2454-1907, p. 12-20. DOI: https://doi.org/10.29121/ijetmr.v7.

[4] **Rakotomahenina Pierre Benjamin** and Andriamasimanana Origène Olivier, « The Knowledge Management System in Open and Distance Learning», *International Journal of Recent Scientific Research*, 2020/11 (Vol. 6), ISSN: 0978-3031, p. 38808-38814. DOI: http://dx.doi.org/10.24327/ijrsr.2020.1106.5387.

[5] **Rakotomahenina Pierre Benjamin** and Rakotovao Manovosoa Finaritra, «The management of risks related to the open and distance learning system», *International Journal of Engineering Technology Research & Management*, 2020/4 (Vol. 10), ISSN: 2456-9348, p. 77-87, URL http://www.ijetrm.com/issues/files/Oct-2020-17-1602925404-08.pdf.

[6] **Rakotomahenina Pierre Benjamin** and Rakotovao Manovosoa Finaritra, «Study of the orientations of higher education projects in Madagascar», *International Journal of Innovative Science, Engineering & Technology*, 2020/12 (Vol. 7), ISSN: 2348 – 7968, p. 439-447, URL: http://www.ijiset.com/vol7/v7s12/IJISET_V7_I12_35.pdf.

[7] **Rakotomahenina Pierre Benjamin** and Solofomiarana Rapanoël Tsirinirina, «The management and the accounting and financial organization system of lasallian schools in Madagascar», *International Journal of Engineering Technology Research & Management*, 2020/4 (Vol. 11), ISSN: 2456-9348, p. 77-87, URL http://www.ijetrm.com/issues/files/Nov-2020-26-1606398471-N8.pdf.

[8] **Rakotomahenina Pierre Benjamin**, « Gestion des risques liés à la réalisation de projet dans un pays en voie de développement », *Revue de la Faculté d'Economie, de Gestion et de Sociologie (DEGS)*, 2010/1 (Vol.2), ISSN 2075-99X, p. 71-89.

[9] Rakotovao Manovosoa Finaritra, **Rakotomahenina Pierre Benjamin**, "The impact of internal marketing on service quality, perceived value, consumer satisfaction and loyalty in the service sector", *International Journal of Multidisciplinary Research And Analysis (IJMRA)*, 2021/02 (Vol.04), ISSN

(print): 2643-9840, ISSN (online): 2643-9875, p.218-227, URL: http://ijmra.in/v4i2/17.php, DOI: 10.47191/ijmra/v4-i2-17.

[10] Rakotovao Manovosoa, Ramambazafy Nicolas, **Rakotomahenina Pierre Benjamin,** "The moderating effect of equity on the links between perceived expectations, quality of service, emotions, satisfaction and loyalty: Case of Restaurants", *International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET)*, 2021/03 (Vol.10), e-ISSN: 2319-8753, p-ISSN: 2320-6710, DOI: 10.15680/IJIRSET.2021.1003003, URL: http://www.ijirset.com/volume-10-issue-3.html

[11] Rakotovao Manovosoa, Ranjatoelina Jérémy, **Rakotomahenina Pierre Benjamin**, Solofomiarana Rapanoël Tsirinirina, «The determinants of satisfaction in restoration: The role of the dimensions of justice, emotions and disconfirmation», *International Journal of Multidisciplinary Research and Development*, 2020/12 (Vol.7), ISSN Online: 2349-4182, ISSN Print: 2349-5979, p. 116-124. URL: http://www.allsubjectjournal.com/search?keyword=7-12-30.

[12] Rakotovao Manovosoa, Ranjatoelina Jérémy, **Rakotomahenina Pierre Benjamin**, Solofomiarana Rapanoël Tsirinirina, «Musical quality, perceived value, equity in satisfaction and behavioral intention in a jazz festival», *EPRA International Journal of Multidisciplinary Research*, 2020/12 (Vol.6), ISSN Online: 2455-3662, p.358-365. DOI: https://doi.org/10.36713/epra5904.

[13] Rakotovao Manovosoa, Razafimbelo Ando, Ralijaona Tiana et **Rakotomahenina Pierre Benjamin**, « Les déterminants et les conséquences de la satisfaction des étudiants dans le cadre de l'enseignement supérieur : Cas des établissements publics d'Antananarivo », *Cahiers des Sciences sociales, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo*, 2020/1 (Vol.4). **ISSN (en ligne)**: 2518-8887**, ISSN (imprimé)**: 2518-8895.

[14] Solofomiarana Rapanoël Tsirinirina, **Rakotomahenina Pierre Benjamin** & Ramanankonenana, T., «Traditional trade vs. e-commerce: does product quality have the same value? A case study of the city of Antananarivo, Madagascar», *International Journal of Engineering Technologies and Management Research*, 2020/12(Vol. 7), ISSN: 2454-1907, p. 33-44. https://doi.org/10.29121/ijetmr.v7.i12.2020.829.

[15] Solofomiarana Rapanoel Tsirinirina, Ramanankonenana Tamby Misaina, Rakotovao Manovosoa Finaritra, **Rakotomahenina Pierre Benjamin**, "Does the Purchase Method Influence Customer Satisfaction? A Case Study of Online and Direct Sales in Madagascar", *International Journal of Science and Research (IJSR)*, 2021/02 (Vol.10), ISSN: 2319-7064, p.1570 – 1576**,** URL: https://www.ijsr.net/get_count_search.php?paper_id=SR21205005347.

4.2 Liste des Publications des mémoires/ouvrages académiques

[1] RAKOTOMAHENINA Pierre Benjamin (2010), « La coopération, un outil de gestion des risques de projet », Thèse de Doctorat en Gestion, Faculté de Droit, d'Economie, de Gestion et de Sociologie (D.E.G.S), Université d'Antananarivo, 313p.

[2] RAKOTOMAHENINA Pierre Benjamin (2004), « Analyses du secteur textile à Madagascar », Grand Mémoire de DEA en Gestion, Faculté de Droit, d'Economie, de Gestion et de Sociologie (D.E.G.S), Université d'Antananarivo, 90 p.

[3] RAKOTOMAHENINA Pierre Benjamin (1999), « Projet de création d'une unité de chapellerie à Antananarivo », Mémoire de Maîtrise en Gestion, Faculté de Droit, d'Economie, de Gestion et de Sociologie (D.E.G.S), Université d'Antananarivo, 110 p.

4.3 Liste des Publications des cours en ligne

[1] RAKOTOMAHENINA Pierre Benjamin (2020), Le management interculturel (Niveau Master), FOAD Gestion, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo, 50p.

[2] RAKOTOMAHENINA Pierre Benjamin et RAKOTOVAO Fianaritra Manovosoa (2020), Le management des processus d'innovation (Niveau Master), FOAD Gestion, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo, 50p.

[3] RAKOTOMAHENINA Pierre Benjamin (2019), La gestion de projet (Niveau Master), FOAD Gestion, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo, 50p.

[4] RAKOTOMAHENINA Pierre Benjamin (2019), L'éthique des affaires (Niveau Master), FOAD Gestion, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo, 50p.

[5] RAKOTOMAHENINA Pierre Benjamin (2018), Le contrôle managérial (Niveau Master), Faculté d'Economie, de Gestion et de Sociologie, FOAD Gestion, Université d'Antananarivo, 50p.

[6] RAKOTOMAHENINA Pierre Benjamin et RANOROVOLOLONA Aimée Lucie (2018), La comptabilité des groupes : La consolidation (Niveau Master), FOAD Gestion, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo, 50p.

[7] RAKOTOMAHENINA Pierre Benjamin et RAVALITERA Basile (2017), L'organisation et la stratégie d'entreprise (Niveau Licence), FOAD Gestion, Faculté d'Economie, de Gestion et de Sociologie, Université d'Antananarivo, 50p.

[8] RAKOTOMAHENINA Pierre Benjamin (2006), La comptabilité générale (Niveau Licence), FOAD, Université Tuléar, 70p.

4.4   LISTE DES RAPPORTS DE RECHERCHE

[1] RAKOTOMAHENINA Pierre Benjamin (2014), Etude sur le lancement du premier appel à projet et les orientations du second appel à projet du fonds compétitifs et d'innovation pour l'amélioration de l'Enseignement Supérieur et de la Recherche Scientifique à Madagascar, Ministère de l'Enseignement supérieur et de la recherche scientifique et La Coopération franco-malgache, Juin 2014.

[2] RAKOTOMAHENINA Pierre Benjamin (2003), Structure de contrôle et développement de PME, Rapport de recherche en DEA, Faculté de Droit, d'Economie, de Gestion et de Sociologie de l'Université d'Antananarivo.

5. EXPERIENCES PROFESSIONNELLES

5.1   Expériences pédagogiques et académiques en qualité d'Enseignant-chercheur

Période	Poste de travail	Eléments constitutifs dispensés par niveau
2007-jusqu'à ce jour	Enseignant-chercheur (Permanent depuis 2012 jusqu'à ce jour, Vacataire (de 2007 à 2011) au Département Gestion, Faculté d'Economie, de Gestion et de Sociologie (DEGS) de l'Université d'Antananarivo	Gestion de projet, Ingénierie Financière, Management interculturel (M2), Contrôle managérial et Comptabilité des Groupes (M1), Organisation et stratégie d'entreprise (L3) ; Méthodologie de recherche (L 3)
2008-2016	Enseignant vacataire au Département d'Etudes Françaises et Francophones (DEFF), Faculté des Lettres et Sciences humaines de l'Université d'Antananarivo	Management L1-M2
2009- 2016	Enseignant vacataire au Département Interdisciplinaire de la Formation Professionnelle (DIFP), Faculté des Lettres et Sciences humaines de l'Université d'Antananarivo	Management L1
2012 jusqu'à ce jour	Enseignant vacataire au Département Economie - Faculté de DEGS de l'Université d'Antananarivo	Contrôle de Gestion (L3, M2)
2012- 2018	Enseignant vacataire au Département Sociologie - Faculté de DEGS de l'Université d'Antananarivo	Initiation aux Principes de Gestion (L1)
2014-2017	Faculté des Sciences de l'Université d'Antananarivo	Principes de gestion (L3)
2009- 2017	Ecole Supérieure du Sacré Cœur Antanimena (ESSCA	Techniques bancaires (L1), Management de la Qualité (L3), Gestion de projet, Tableau de bord (M1)
2007- 2017	Ecole Professionnelle Supérieure Agronomique (EPSA Bevalala)	Management et Gestion de Projet (L3)
2005-2011	Institut Supérieur d'Administration d'Entreprise (ISAE) – Ankatso	Economie d'Entreprise (L1) et Comportement managérial (M1);
2007-2009	Athnée Saint Joseph Antsirabe (ASJA)	Marketing (L2)
2003-2011	INFOCENTRE DE LA SALLE (Soavimbahoaka)	Gestion de projet, Comptabilité et Management (L2, L3 et M1)

5.2 Expériences en direction et encadrement des mémoires

Année Universitaire	Fonction	Nombre d'étudiants		
		Licence	Master	Doctorat
2020	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	1
2019	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	2
2018	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2017	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2016	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2015	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2014	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2013	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2012	Encadrement de mémoire	8	4	
	Participation à un jury	20	10	
2012 à 2020	**TOTAL LICENCE**	**252**		
2012 à 2020	**TOTAL MASTER**		**126**	
2012 à 2020	**TOTAL DOCTORAT**			**3**
2012 à 2020	**TOTAL GENERAL** (Tous les niveaux confondus)	**381**		

5.3   Expériences en travaux de consultance

Période	Objet du contrat	Etablissement/Organisme
2014	Consultance en étude sur « le lancement du premier appel à projets et orientations du second appel à projet du Fonds Compétitif»	Ministère de l'Enseignement supérieur et de Recherche Scientifique (MESUPRES)
2012-2016	Expertise en évaluation des dossiers d'habilitation des offres de formation auprès du conseil National de l'Habilitation (CNH)	Ministère de l'Enseignement supérieur et de Recherche Scientifique (MESUPRES)
2010	Consultance en conception du cours de la comptabilité générale (FOAD)	Université de Toliara
2005	Consultance/Formation en Plan comptable Général (PCG 2005)	Club Academy
2001 – 2004	Socio-organisation de projet	ONG MITSIMBINA
2002-2003	Pilotage de l'équipe lors du montage de 17 sous projets dans le district d'Ambatomainty, Mahajanga	Projet de Soutien pour le Développement Rural (PSDR/Mahajanga)
2001	Equipe statistique sur l'Efficacité des Dépenses Publiques à Ambatondrazaka	Institut National de la Statistique (INSTAT)

5.4 Expériences managériales et techniques

Période	Poste occupé	Etablissement/Entreprise
2014-jusqu'à ce jour	Responsable de la Formation ouverte et à Distance en Sciences de Gestion (FOAD Gestion)	Faculté d'Economie, de Gestion et de Sociologie de l'Université d'Antananarivo
2014-jusqu'à ce jour	Responsable du Parcours « Audit et Contrôle »	Département Gestion de l'Université d'Antananarivo
Juin 2014	Chef de Département Gestion par Intérim	Département Gestion de l'Université d'Antananarivo
2003-2010	Chef de Département Formation Continue et du Cycle « Master »	INFOCENTRE DE LA SALLE - Institut Supérieur Spécialisé en Informatique et en Gestion (Soavimbahoaka)
2005-2008	Responsable Administratif et Financier	Entreprise de Bâtiments et Travaux Publics SOLOFOMAMI à Antananarivo
2004-2007	Directeur Exécutif	Association FANEVA
1999	Stagiaire	Ministère de l'Industrialisation et de l'Artisanat – Direction de la Promotion de l'Artisanat

6. DIPLOME DE DOCTORAT DE NOUVEAU REGIME

REPOBLIKAN'I MADAGASIKARA

Fanindrazana-Fahafahana-Fandrosoana

DIPLÔME DE DOCTORAT NOUVEAU RÉGIME

Faculté de Droit, d'Economie,
de Gestion et de Sociologie

Le Ministre de l'Enseignement Supérieur et de la Recherche Scientifique, et par délégation le Président de l'Université d'Antananarivo,
Vu l'ensemble des textes en vigueur portant création des Universités et fixant l'organisation et le fonctionnement des Universités et des Etablissements d'Enseignement Supérieur,
Vu le Procès-Verbal des membres du jury, de l'Arrêté Universitaire 2009/2010,

CONFÈRE À:

Nom : RAKOTOMAHENINA Pierre Benjamin

Né(e) le : 07 août 1975 à Fandriana (Madagascar)

Le Grade de DIPLÔME (É) DE DOCTORAT NOUVEAU RÉGIME EN ECONOMIE

Option : SCIENCES DE GESTION

Mention : Très Honorable   *pour en jouir avec les droits et prérogatives qui y sont attachés*

Antananarivo, le 11 octobre 2012

Jampliment

RANJOVONA-ANDRIAMARO

NUMÉRO D'ORDRE : 286004 / 000 010

MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR ET DE LA RECHERCHE SCIENTIFIQUE

Le Président,

ANDRIANTSIMARAVANDY M...I
Professeur Titulaire

7. CERTIFICAT ADMINISTRATIF

UNIVERSITÉ D'ANTANANARIVO

Domaine des Sciences de la Société

Faculté d'Economie, de Gestion et de Sociologie

Décanat

Service Personnel

N°21 /G2/UA/Fac.EGS/D/PERS/PE/CA

CERTIFICAT ADMINISTRATIF

Le Doyen par Intérim de la Faculté d'Economie, de Gestion et de Sociologie de l'Université d'Antananarivo, soussigné, certifie que :

Monsieur RAKOTOMAHENINA Pierre Benjamin

IM 342 772

Maître de Conférences

est Enseignant Permanent au sein de la Mention Gestion de la Faculté d'Economie, de Gestion et de Sociologie de l'Université d'Antananarivo depuis le 12 Novembre 2012 jusqu'à ce jour.

En foi de quoi, le présent certificat lui est délivré pour servir et valoir ce que de droit.

Antananarivo, le 07 JAN 2021

Le Doyen par Intérim,

ANNEXE N°2 :
LISTE DES PUBLICATIONS

ARTICLE SCIENTIFIQUE N°1

LA FORMATION OUVERTE ET A DISTANCE, UN DISPOSITIF DE DEVELOPPEMENT DE L'ENSEIGNEMENT SUPERIEUR A MADAGASCAR

Auteur: Rakotomahenina Pierre Benjamin

Organisateurs: Université d'Antananarivo et Akademia Malagasy

Type de communication : Communications dans les domaines des arts, des lettres, des sciences juridiques, économiques, sociales et de gestion.

Date de publication: 08 décembre 2017

Lieu de publication: Akademia Malagasy, Antananarivo, Madagascar

Certificat de publication de l'article n°1:

REPOBLIKAN'I MADAGASIKARA
Fibavana - Tanindrazana - Fandrosoana

LE PRÉSIDENT
acnals@moov.mg

N° 2021/011-AM/P

Antananarivo, le 19 Janvier 2021.

ATTESTATION

La communication ci-après :

- titre : « La formation ouverte et à distance, un dispositif de développement de l'enseignement supérieur à Madagascar »
- auteur : M. RAKOTOMAHENINA Pierre Benjamin

a été présentée à l'Académie Malgache lors de la Séance Spéciale, Première journée Académie Malgache – Université d'Antananarivo le 08 Décembre 2017.

En foi de quoi la présente Attestation est délivrée pour servir et valoir ce que de droit.

Raymond RANJEVA

Académie Nationale des Arts, des Lettres et des Sciences

LA FORMATION OUVERTE ET A DISTANCE, UN DISPOSITIF DE DEVELOPPEMENT DE L'ENSEIGNEMENT SUPERIEUR A MADAGASCAR

par RAKOTOMAHENINA Pierre Benjamin

FINTINA

Manoloana ny fivoaran'ny teknolojia momba ny fampahalalam-baovao sy ny fifandraisana ary ny olana eo amin'ny fotodrafitrasa eny amin'ny fampianarana ambaratonga ambony, ny Fampianarana Omena sy Ampitain-Davitra (FOAD) dia heverina ho rafitra mety amin'ny fotoana sy ny amin'ny toerana rehetra mba hitondra fanavaozana sy fanatsarana ny ara-akademika sy ny matihanina. Ny fandalinana ny traikefan' ny FOAD momba ny Fitantananana eny amin'ny Anjerimanotolo an'Antananarivo dia mampiseho ny tombontsoa maro ho an'ny mpianatra, ny mpampianatra - mpikaroka ary ny fitondrana ankapobeny.

TENY MANAN-DANJA

Fampianarana Omena sy Ampitain-Davitra (FOAD), Fitantanana, Teknolojia momba ny fampahalalam-baovao sy ny fifandraisana, Fampianarana ambaratonga ambony.

RESUME

Face à l'évolution des Technologies de l'Information et de la Communication et au problème d'infrastructure au niveau de l'enseignement supérieur, la Formation Ouverte et A Distance (FOAD) est considérée comme un système flexible dans le temps et dans l'espace pour l'innovation et l'amélioration sur le plan académique et professionnel. L'étude empirique de la FOAD Gestion de l'Université d'Antananarivo montre des avantages pour les Etudiants, les Enseignants – Chercheurs et l'Administration générale.

MOTS CLES:

Formation Ouverte et à Distance (FOAD), Gestion, Technologies de l'Information et de la Communication, Enseignement supérieur.

ABSTRACT

Faced with the evolution of Information and Communication Technologies and the problem of infrastructure on higher education, Open and Distance Learning (ODL) is considered a flexible system in time and space for innovation and improvement on the academic and professional areas. The empirical study of the ODL Management at the University of Antananarivo shows advantages for the Students, the Teachers - Researchers and the General Administration.

KEYWORDS

Open and Distance Learning (ODL), Management, Information and Communication Technologies, Higher education.

I. INTRODUCTION

Dans le cadre de la recherche des stratégies de développement de l'enseignement supérieur, le basculement vers le système Licence, Master et Doctorat (LMD) constitue une orientation fulgurante, au cours de cette dernière décennie, aussi bien au niveau national qu'international. Ainsi, BACHY Sylviane (2013, p.60) rappelle que l'Union européenne a développé le système européen de transfert et d'accumulation de crédits (European Credits Transfer System ou ECTS) afin de faciliter la comparaison des programmes d'études dans différents pays. Madagascar a aussi opté, ces derniers temps, pour changer son mode de transfert de savoirs devant la tendance actuelle au niveau des pays développés. L'adoption de ce système, par la Grande Île, vise à « rénover les offres de formation en vue d'une meilleure synergie avec d'autres systèmes universitaires, mais également pour être cohérent avec les besoins du pays, dans les secteurs du développement économique et social »[1].

En réalité, le système éducatif malgache est vulnérable face à un faible taux de participation dans l'enseignement supérieur moins de 5% contre environ 8% à 20% en Afrique subsaharienne[2]. De plus, la demande pour l'enseignement supérieur à Madagascar dépasse l'offre due à l'insuffisance de la capacité d'accueil des universités publiques. Chaque année, la Mention Gestion[3] de l'Université d'Antananarivo, à titre d'illustration, enregistre plus de 4 000 dossiers de candidatures en première année de Licence (L1) dans toute l'Île. Etant donnée la limite de la capacité d'accueil, environ 1 000 étudiants uniquement sont recrutés à l'issue du test d'accès.

La réflexion porte sur l'amélioration de l'accès des étudiants à l'enseignement supérieur et l'offre de meilleur environnement d'apprentissage face au développement des Technologies de l'Information et de la Communication (TIC). De nos jours, l'éducation sans recours aux TIC ne saurait être efficace car chaque facette de notre vie dépend au quotidien d'un aspect ou d'un autre de ces technologies [SODIYA Adesina Simeon et al. (2014, p.85)]. Selon KARSENTI Thierry et COLLIN Simon (2011, p.494) les TIC formeraient un vecteur inconditionnel et automatique de développement socio-économique. Cependant, MESSAOUDI Faouzia et al. (2012, p. 14) montre que le développement des TIC offre, au profit de l'enseignement, de meilleures opportunités de diffusion des savoirs et des connaissances.

Pourtant, l'utilisation réelle des TIC dans le domaine de l'enseignement est loin d'être établie, le potentiel de cet outil étant sous-exploité par les professionnels de l'éducation [DESSALEGN Mequanint et DAGMAWI Lemma (2014, p.75)]. La question se pose alors : *Comment développer un système de formation avec l'utilisation des TIC ?* L'objectif de la présente étude est de contribuer à l'innovation et à l'amélioration de l'enseignement supérieur à travers les TIC. Il s'agit de vérifier l'hypothèse suivante : « La FOAD constitue

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[1] Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (2013), Stratégie nationale de la Recherche Scientifique à Madagascar, p.16
[2] Source : UNESCO, http://uis.unesco.org/fr/country/mg
[3] Source : Service de la scolarité de la Mention Gestion de l'Université d'Antananarivo (2017)

un système de formation approprié au contexte actuel de l'enseignement supérieur».

La démarche méthodologique adoptée est basée sur l'étude empirique à travers l'analyse de l'expérimentation au niveau de la FOAD Gestion de l'Université d'Antananarivo. La mention Gestion de l'Université d'Antananarivo est très bien positionnée pour la réalisation de l'étude sur terrain en tant qu'un projet pilote[4] au sein de la Faculté de Droit, d'Economie, de Gestion et de Sociologie (D.E.G.S) de ladite l'Université.

Pour aller plus loin, le cadrage théorique et méthodologique sera, en premier lieu, explicité dans le présent article. Les résultats de l'étude seront, ensuite, montrés afin de savoir les expériences vécues. Des discussions sur les résultats en tenant compte des littératures seront sur la table afin de tirer à la fin des conclusions si la FOAD est vraiment un outil de développement de l'enseignement supérieur.

II. CADRAGE THEORIQUE ET METHODOLOGIQUE

L'étude empirique de la FOAD nécessite une analyse conceptuelle à travers la dichotomie entre « la présence et la distance. Deux regards croisés, c'est-à-dire, « de la présence à la distance », d'une part et « de la distance à la présence » de l'autre, constituent comme un passage obligé avant la présentation proprement dite de la méthodologie de travail.

II.1 De la présence à la distance
L'analyse de l'évolution de l'enseignement en commençant par la formation en présentiel jusqu'à la conception du système de formation adapté aux TIC va donner des éclaircissements sur les concepts du dispositif de la FOAD. Dans cette optique, les notions sur la FOAD sont liées à un contexte historique. POUTS-LAJUS Serge et RICHE-MAGNIER Murielle (1999, p.20) racontent que l'enseignement par correspondance a été adopté, dès le milieu du XIXe siècle en Angleterre et à la fin du siècle en France pour répondre aux besoins éducatifs de personnes empêchées de participer, pour des raisons professionnelles ou physiques, à des cours collectifs. Selon GERIN-LAJOIE Serge (2011, p.352), c'est dans le milieu des années 1980 que le Canada se lance dans la formation à distance, afin de donner à la population ne résidant pas dans la région de Québec la possibilité d'avoir accès à l'enseignement universitaire. Les lacunes techniques, socioéconomiques et pédagogiques ont conduit des établissements universitaires africains comme l'université virtuelle africaine (UVA), l'université Cheikh Anta Diop de Dakar (UCAD) et le Centre national de télé-enseignement de Madagascar, de mettre en place au début des années 90 le système de formation à distance [DEPOVER, C. et ORIVEL, C. (2012) et BECHE Emmanuel (2016)].

Cependant le problème d'infrastructure caractérisé par la limite de la capacité d'accueil de l'université par rapport au nombre des bacheliers a deux conséquences, d'après CAUVIN Martine   et LACOMBE Jacques (1999, p.30): les établissements d'enseignement supérieur ont à gérer une

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[4] Cette offre de formation a été déjà habilitée selon l'Arrêté n°37562/2014-MESupReS du 29 décembre 2014.

masse importante d'étudiants dans le premier cycle ; ils ont à faire preuve d'une grande capacité d'encadrement compte tenu de la moindre sélection des étudiants qui franchissent le seuil de l'université. Selon DEPOVER Christian (2016, p.22), lorsqu'on pense aux TIC, on évoque souvent les possibilités de la formation à distance ou de l'apprentissage mobile afin d'atteindre des populations éloignées comme les ethnies minoritaires dans les zones enclavées.

L'université, garante de la qualité académique et pédagogique des enseignements supérieurs se trouve alors confrontée aux conséquences du développement des TIC, vecteurs d'une plus large information, outils modernes au service de la formation mais aussi sources de profits par l'arrivée de cours en ligne [PERLEY Jim (1999)].

D'où l'apparition des termes "la Formation Ouverte et A Distance " (FOAD), équivalents du « e-learning » en anglais [BLANDIN Bernard (1999)]. Pour cela, deux concepts peuvent être tirés : « la formation ouverte » et « la formation à distance ».

D'un côté, les formations ouvertes sont « des actions de formation s'appuyant en tout ou partie sur des apprentissages non présentiels en auto-formation ou avec tutorat, à domicile, dans l'entreprise ou en centre de formation. »[5] Autrement dit, c'est toute forme d'étude dont certains aspects souples la rendent plus accessible " [BLANDIN Bernard (1999)]. De plus, D'HALLUIN Chantal et LOONIS Michel (1999, p. 108) considèrent les caractéristiques des formations ouvertes comme les formations auxquelles formateurs et apprenants participent soit en même temps, mais dans des espaces différents, soit dans le même lieu mais à des moments différents, soit enfin à des moments et dans des lieux différents. En effet, le terme « ouvert » est ici synonyme de « flexible ».

De l'autre côté, la notion de distance a longtemps été mobilisée pour différencier les dispositifs de formation fondés sur le principe de la séparation spatiale et temporelle des formateurs, tuteurs et apprenants. En outre, PAQUELIN Didier (2011, p.569) rappelle la définition donnée par l'AFNOR[6] qu'un dispositif de formation à distance est « un système de formation conçu pour permettre à des individus de se former sans se déplacer dans un lieu de formation et sans présence physique d'un formateur ». Au fil du temps, la définition de la formation à distance a évolué. Celle qui est soutenue est la suivante: *« Système de formation qui permet à un étudiant d'apprendre seul ou en situation de collaboration, avec du matériel didactique approprié, avec différents moyens de communication et avec le soutien à distance de personnes- ressources. Cette formation se fait avec un minimum de contraintes d'horaire ou de déplacement, à l'exception des contraintes requises pour les évaluations sommatives des apprentissages »*[7].

Par conséquent, il est nécessaire de retenir la définition simple de la FOAD comme un dispositif de formation flexible dans le temps et dans l'espace. Cette idée de

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[5] C'est la définition de la Délégation à l'Emploi et à la Formation Professionnelle (DGEFP) dans la Circulaire relative aux FOAD émise le 20 juillet 2001, citée par BERTRAND Isabelle (2003, P.68)

[6] Afnor Terminologie Fascicule explicatif FD X 50-751 paragraphe 3.5.7

[7] C'est la définition proposée par GERIN-LAJOIE Serge (2011, p.353)

flexibilité caractérise le changement considérable de la FOAD par rapport à la formation traditionnelle. Selon DENIS (2003), « *le passage de la formation en présentiel à la formation à distance (FAD) bouleverse tous les rôles des acteurs (concepteur, formateur, apprenant, etc.).*». En effet, passer d'un état de transmetteur de savoir (dans la formation classique) à celui de facilitateur de la construction des savoirs en FOAD, impose tout un changement de l'identité professionnelle du formateur, car il n'est plus le principal agent qui s'occupe de dispenser des connaissances mais plutôt un catalyseur.

Le basculement de la formation en présentiel à la formation à distance nécessite effectivement des TIC. Ces technologies agissent ainsi comme vecteur d'accroissement spatial, de réduction temporelle et de densification sociale, d'après, PAQUELIN Didier (2011, p. 568)[8]. C'est la raison pour laquelle, les acteurs historiques de l'enseignement en présentiel intègreront, progressivement une partie de ce dispositif technologique (les ENT par exemple ou la visioconférence) et certaines caractéristiques des institutions d'enseignement à distance (l'inscription en ligne, le cahier de texte numérique…). [PAQUIENSEGUY Françoise (2011, p.522)]. C'était le concept «de la présence à la distance ». Mais qu'en est-il de celui «de la distance à la présence » ?

II.2 De la distance à la présence

La principale raison de la distance, c'est-à-dire, la séparation spatiale et temporelle des formateurs, tuteurs et apprenants risque de conduire à « la disparition dans la nature » de différents acteurs de la FOAD si la notion de présence est écartée totalement. Voilà pourquoi PAQUIENSEGUY Françoise (2011, p.523) trouve que la tendance des institutions qui offrent un enseignement à distance tendent à l'inclusion de sessions en présentiel dans leurs programmes. La « présence à distance » constitue l'une des dimensions qu'il faudra sans doute explorer systématiquement [PERAYA Daniel (2011, p.446)]. En outre, PAQUELIN Didier (2011) a étudié, dans son article intitulé « La distance : questions de proximités », les différentes formes de proximités telles que la proximité spatiale (la localisation des activités) et la proximité a-spatiale (l'organisation des activités). La présence dans la distance apparaît de plus en plus comme l'une des composantes de l'efficience du dispositif FOAD.

L'enjeu de cette présence relève davantage de mises en lien, de relations entre différents acteurs (apprenants, formateurs, tuteurs). Le postulat posé par PAQUELIN Didier (2011, p.566) montre que la mise en usage d'un dispositif sociotechnique dans un contexte de formation à distance, qui articule des activités d'apprentissage en présence et des activités d'apprentissage à distance relève de proximités multiples entre les acteurs.

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[8] *L'élargissement spatial :* cyber géographique ou plus communément nommé numérique - La *réduction temporelle :* accès immédiat à l'information et de la communication en un clic – La *densification du social :* développement de la communication numérique et des réseaux sociaux.

Si la proximité géographique, concrétisée par l'organisation de regroupements d'apprenants proches de leurs lieux de résidence est un vecteur de ce processus, nous questionnerons d'autres dimensions de cette distance proximale (exemples : proximité temporelle, proximité sociale, proximité cognitive). Pour assurer ces proximités, les interactions entre formateur et apprenant(s) d'une part, et entre apprenants d'autre part, sont déterminantes pour le processus d'apprentissage [D'HALLUIN Chantal et LOONIS Michel (1999, p. 110)]. Dans ce cas, le modèle de Classe Virtuelle Synchrone (CVS) ou « Téléformation » évoqué par GERIN-LAJOIE Serge (2011, *p*p.358-360) est plus prépondérant.

Dans le cadre de la CVS, les étudiants sont invités à suivre une série de séances synchrones entre les acteurs de la FOAD. Les travaux d'interactions sont beaucoup plus évolutifs par rapport aux différents modèles comme la forme d'autoformation « Imprimée » dont les étudiants suivent uniquement un cours avec du matériel imprimé structuré et utilisent le téléphone ; le modèle « TV » tout en regardant seulement les émissions télévisées ; le modèle « Électronique » dont les étudiants sont, malheureusement, bornés à leur matériel didactique à partir d'un disque numérique ou d'un site web et le modèle de cours en ligne avec apprentissage collaboratif, en principe, limité généralement entre les étudiants.

Toutefois, il nécessaire de déployer le concept de CVS dans la mesure où la FOAD nécessite une justification de la présence des activités pédagogiques, techniques et administratives. En d'autres termes, l'introduction de la notion de gestion de traçabilité, dans le Système de Management de la Qualité (SMQ) dispose d'une importance capitale. Selon la norme ISO 8402, la traçabilité se définit comme "l'aptitude à retrouver l'historique, l'utilisation ou la localisation d'un article[9] ou d'une activité […] au moyen d'une identification enregistrée". Il est, en effet, envisageable le postulat de la création de la Classe Virtuelle Synchrone et Traçable ou « CVS – T ». Il s'agit de la recherche de la traçabilité de l'apprentissage et du dispositif de FOAD via l'ENT pour assurer la présence des activités pédagogiques, techniques et administratives dont le téléphone portable constitue l'outil « pivot ». BRUILLARD, (2010, p. 218) qui réitère l'idée (RABARDEL Pierre, 2005) de qualifier ce téléphone portable comme l'instrument personnel d'interaction par excellence vu ses caractéristiques mobile et terminal de paiement. Actuellement, ce matériel peut être intégré à des applications pédagogiques et surtout de traçabilité dans tous les sens. C'est l'introspection de la présence dans le dispositif de formation ouverte et à distance.
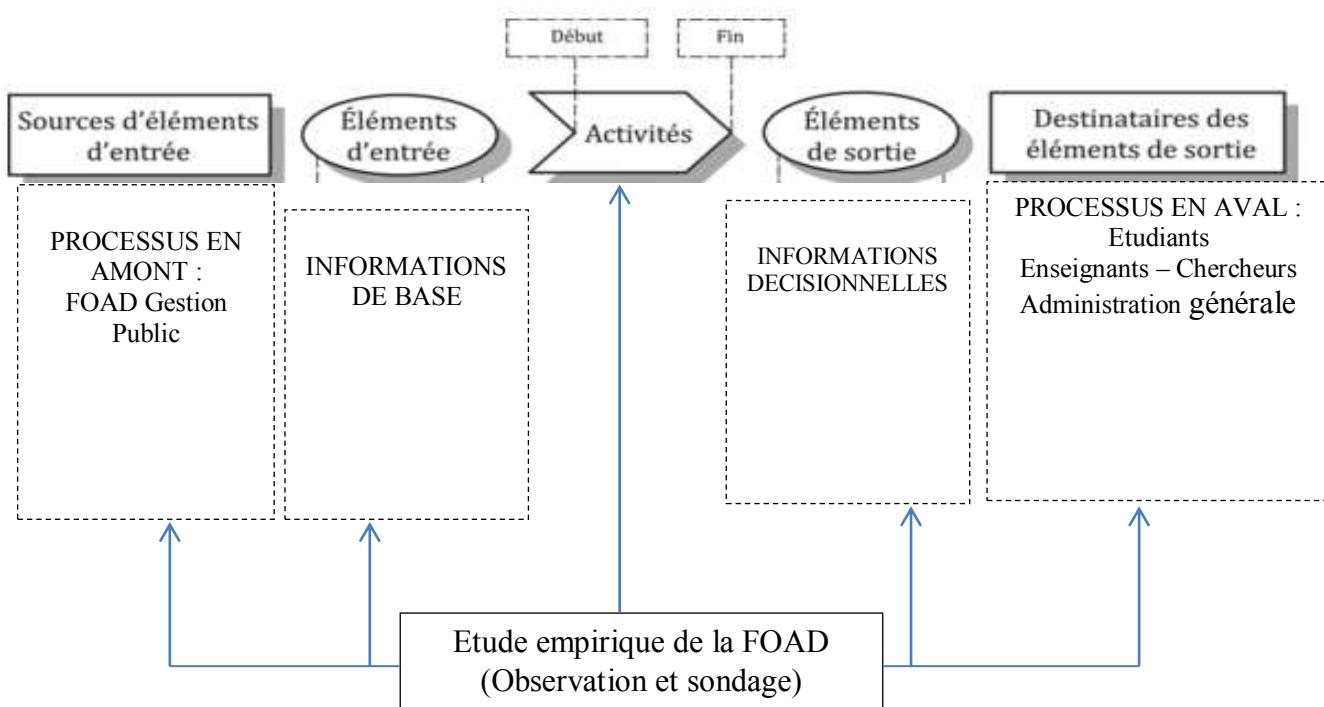
Par conséquent, l'idée de la distance totale et le concept de la présence totale semblent être impossibles face aux TIC et au problème d'infrastructure au niveau de l'enseignement supérieur. La recherche des degrés de la distance et de la présence nécessite alors une étude empirique auprès d'un établissement qui utilise un dispositif de FOAD. D'où le choix du terrain d'étude auprès de la FOAD Gestion de l'Université d'Antananarivo.

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[9] Les normes ISO version 2015 constituent des référentiels applicables dans plusieurs domaines dont l'enseignement supérieur en fait partie. Dans la présente norme internationale, lorsque le terme «produit» est utilisé, il peut également signifier «service».

II.3 __Méthodologie__

Dans le cadre de la réalisation de la présente étude, la méthodologie adoptée est basée sur l'approche processus préconisée par les normes ISO version 2015[10]. Dans ce cas, le processus peut être considéré comme un ensemble des activités en corrélation permettant de transformer les éléments d'entrée en éléments de sortie. La représentation schématique du processus de l'étude est de la manière suivante :

Schéma1 : Processus de l'étude

Selon ce schéma, les informations de base, c'est-à-dire les données issues de la FOAD Gestion et du public, constituent les éléments d'entrée du processus en amont, d'un côté et les données permettant de prendre des décisions à l'endroit des étudiants, des enseignants – chercheurs et de l'administration générale forment le processus en aval, de l'autre. Pour que les destinataires de ces éléments de sortie puissent bénéficier des résultats de la recherche, l'axe principal du processus basé sur l'étude empirique de la FOAD Gestion a assuré le traitement des éléments d'entrée. Il est à noter que cette analyse expérimentale a été cadrée dans l'étude de développement du système d'enseignement supérieur à l'aide des TIC. Cette FOAD Gestion, un projet déjà opérationnel depuis l'année universitaire 2015, au sein de la Faculté de Droit, d'Economie, de Gestion et de Sociologie de l'Université d'Antananarivo constitue, en réalité, la zone d'étude empirique. Pour savoir ses expériences, les données ont été issues de l'observation et de l'enquête sous forme de sondage.

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[10] https://www.iso.org

Cette observation a permis de collecter des données internes afin de savoir la situation réelle vécue dans l'organisation. Le basculement de la formation classique en présentiel vers l'utilisation du dispositif de la FOAD a été étudié surtout au niveau de l'originalité, des formes innovatrices et de la pertinence académique.

En outre, un sondage auprès de 120 personnes dont 30 à Antsirabe, 30 à Mahajanga et 60 à Antananarivo a été réalisé afin savoir leurs points de vue concernant la FOAD. Des questions axées sur les TIC au niveau de la pratique de l'Internet et des moyens de communication ainsi que sur le témoignage et l'identification des besoins en FOAD face au problème d'infrastructure ont été posées aux personnes interviewées.

Il faut admettre que l'échantillon a été tellement limité à 120 individus sur 1 110 étudiants, soit 11% environ de l'ensemble des inscrits tous niveaux confondus (L1, L2 et L3) à la FOAD Gestion au cours de l'année universitaire 2017. La saisie et la transcription des réponses ont été réalisées à l'aide du Microsoft Excel. Le traitement de toutes les données a permis de faire sortir quelques données quantitatives telles que les taux d'utilisation des matériels informatiques et de communication et de connexion Internet. L'analyse des données obtenues a conduit à l'établissement d'un modèle de cartographie du processus de la FOAD.

III. RESULTATS

Le système de changement vers la FOAD à partir de la pratique de formation classique en présentiel et la recherche de la présence dans la FOAD, suscitent une attention particulière en tenant compte de l'évolution des TIC et de l'inadéquation des infrastructures au niveau de l'enseignement supérieur.

### III.1 Le basculement de la formation en présentiel à la FOAD
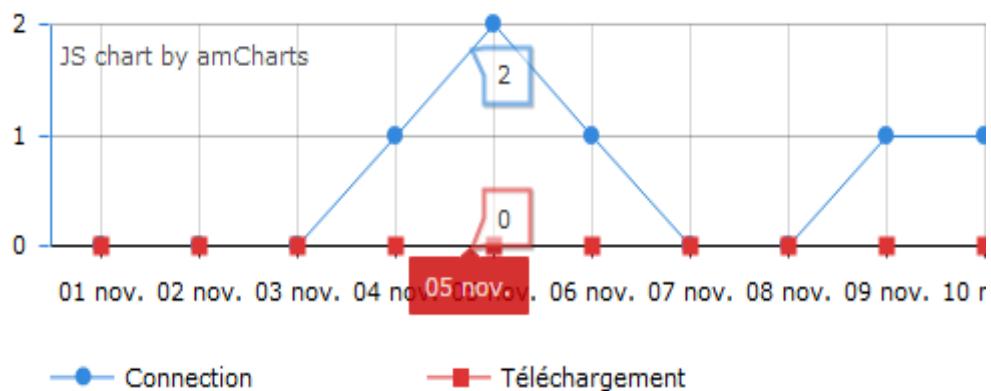
La mise en place du dispositif de FOAD Gestion de l'Université d'Antananarivo a commencé en 2015 si la formation en présentiel est toujours opérationnel depuis 1973. Ces deux modalités de formation au sein de la Mention Gestion sont parallèlement opérationnelles. A l'issue de l'expérimentation pendant ses trois années d'existence, ce dispositif de FOAD, son originalité, ses aspects novateurs et sa pertinence scientifique et pédagogique ont été considérés comme des éléments primordiaux lors de l'étude sur terrain.

Suite à l'observation sur l'utilisation des TIC, il a été constaté que la FOAD Gestion dispose sa propre plateforme dans laquelle les études peuvent être assurées en temps réel et de façon permanente dans l'Espace Numérique de Travail (ENT)[11]. Les relations entre les étudiants et les enseignants telles que l'organisation des séances de regroupement en présentiel, les forums virtuels et

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[11] L'ENT dispose plusieurs appellations comme l'environnement numérique de travail, le cartable numérique ou le bureau virtuel.

les discussions instantanées peuvent aider les étudiants à réaliser efficacement leurs études. Dans cette optique, la pratique de l'ENT à travers le tableau de bord numérique se présente comme suit.

Schéma2 : Tableau de bord numérique

La fréquence d'utilisation de l'ENT, dans ce cas, est à l'ordre de 2 fois de connections au cours d'une semaine. Tout au long de l'étude, il a été demandé aux étudiants enquêtés d'évoquer la principale raison du choix de la FOAD au lieu de poursuivre à la Formation En Présentiel (FEP) ainsi que leur opinion sur l'ENT. La non-admission au test d'accès à la FEP due à la limite de la capacité d'accueil de l'université est justifiée à 45% des réponses fournies contre 40% pour la flexibilité de la FOAD et 15% pour d'autres raisons personnelles. En outre, 90% des charges de travail des étudiants se font en non-présentiel physique des formateurs dont 70% des enquêtés expriment leur satisfaction au niveau de l'ENT contre 20% moins satisfaits face à la difficulté d'accès et 10% n'ont exprimé aucune idée.

Schéma3 : Situation de l'ENT de l'Etudiant

À titre d'illustration, prenons le cas de Nantenaina R., une étudiante au niveau Licence L1 FOAD Gestion au cours de l'année universitaire 2016/2017. *« J'ai opté pour la FOAD Gestion pour suivre mes études universitaires car vu sa souplesse spatio-temporelle et d'autant plus mon ambition est de créer ma propre entreprise. J'habite ici à Antsirabe, ma région natale, située à 160 km de la capitale et je peux étudier au moment et au lieu voulu. Aujourd'hui, mon*

programme est d'étudier le Marketing, un de nos éléments constitutifs dispensés pendant le deuxième semestre d'étude. Je suis satisfaite de l'ENT à l'aide de mon téléphone portable, car je peux travailler dans la plateforme en cliquant 'mes études', 'mes actualités', 'mes profs', 'mes cours' et 'l'emploi du temps' ». Cependant, je trouve que la connexion Internet est relativement lente.

Comme tous les étudiants inscrits légalement, Nantenaina R. dispose d'un identifiant et d'un mot de passe pour accéder à l'ENT. Pour des raisons de sécurité, son compte d'accès à l'ENT est strictement confidentiel. La déconnection et la fermeture du navigateur à la fin de la session de travail constituent des précautions après avoir utilisé l'ENT.

Pour assurer le travail à distance, chaque apprenant dispose de plusieurs supports didactiques à l'aide des matériels informatiques et de communication comme le téléphone portable, l'ordinateur ou la tablette. Il a été également demandé aux enquêtés leurs moyens de connexion internet. Les réponses se présentent comme suit:

Tableau 1 : Outils de travail et de connexion Internet

	Téléphone Mobile			Ordinateur			Tablette		
INTERNET	0	1	2	0	1	2	0	1	2
Propre connexion	8%	13%	79%	18%	57%	25%	80%	8%	12%
Cyber	63%	20%	17%	8%	13%	78%	75%	13%	13%
Recours à l'autrui	77%	17%	7%	22%	45%	33%	92%	4%	4%

0 : Jamais. 1 : Occasionnel. 2 : Fréquent

La majorité des personnes, plus précisément 79%, utilisent habituellement leur propre connexion à l'aide du téléphone contre 25% par le biais de l'ordinateur et 12% uniquement à travers de la tablette. 80% des enquêtés déclarent ne jamais utiliser la connexion via la tablette. Le passage quotidien au cyber tout en utilisant de l'ordinateur représente de 78% des réponses contre respectivement 17% et 13% pour le téléphone et la tablette via wifi. Le recours de connexion à l'autrui comme ses amis et les membres de sa famille n'est pas une pratique courante pour les étudiants : 7% au niveau du téléphone mobile, 33% au niveau de l'ordinateur et 4% sur la tablette.

L'approche innovante à l'aide de la nouvelle technologie permet aux étudiants inscrits d'apprendre les cours et les exercices en toute liberté dans le temps et dans l'espace sans être obligés d'aller assister aux cours en salles. Un guide méthodologique d'apprentissage par Elément Constitutif est également à la disposition des étudiants. Les syllabus sont conçus de façon à ce que la formation puisse répondre aux besoins des utilisateurs qui eux aussi sont invités à participer à l'élaboration des programmes de formation. Ces programmes de formation qui respectent le système LMD sont identiques à ceux dispensés en présentiel. De ce fait, la FOAD Gestion est assurée par les mêmes enseignants en présentiel avec les mêmes sujets et périodes d'examen. A l'issue de la formation, les apprenants peuvent obtenir les diplômes de Licence et/ou du Master délivrés par l'Université d'Antananarivo.
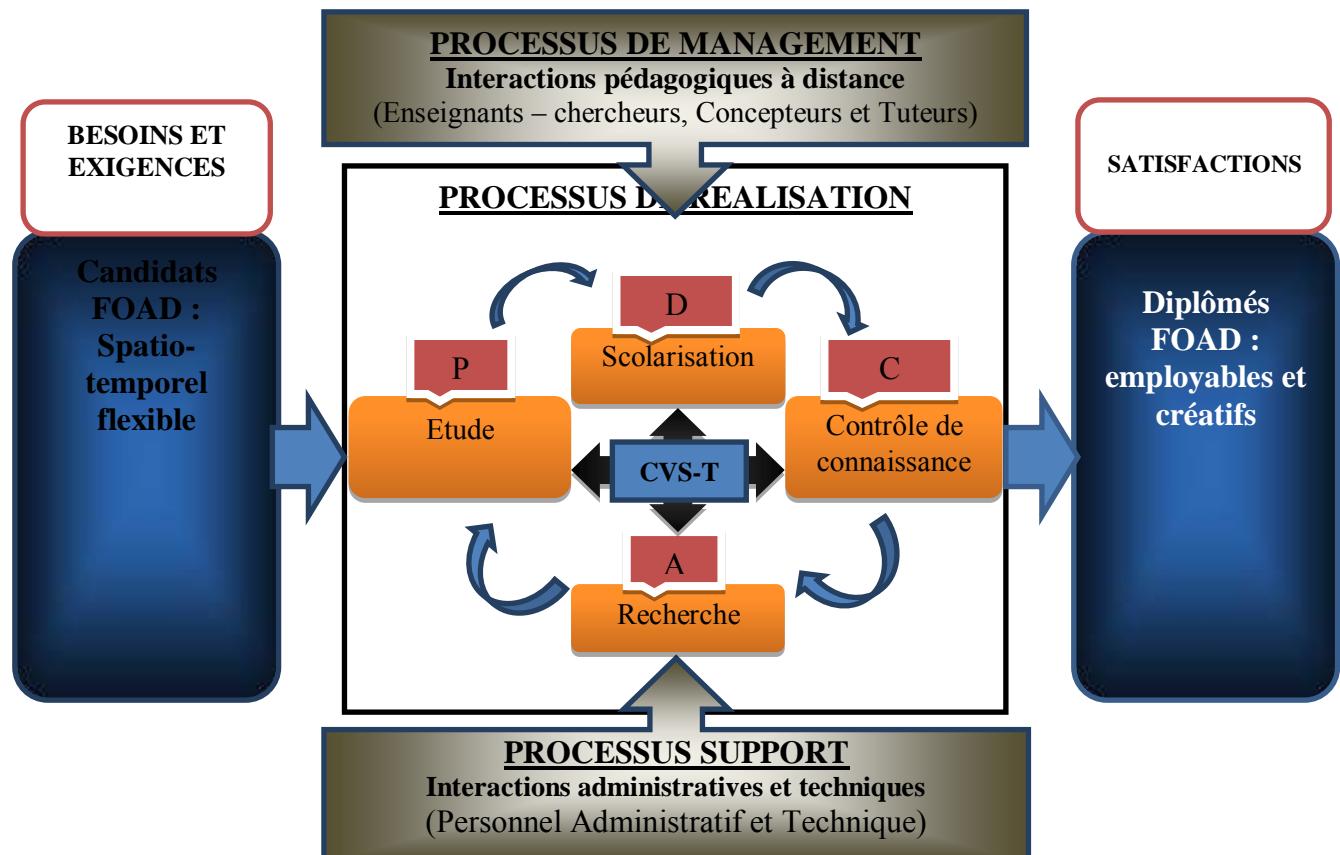
En confirmant l'adhésion de la Mention Gestion de l'Université d'Antananarivo au processus de mise en place du système LMD conformément aux textes en vigueur, la formation est sanctionnée par des Diplômes reconnus au niveau national et international. Suite à la présentation des concepts théoriques, des applications ou des illustrations dans le cours sont à la disposition des étudiants. Outre les applications qui ont été mentionnées dans le cours, des études de cas pratiques sont encore présentées. Les cas réels ou fictifs permettent de conduire les étudiants à mettre en relief les théories et les pratiques sur terrain. Les sujets-types permettent aux étudiants de se préparer avant l'épreuve à l'examen final ou au contrôle continu. De plus, des guides de réalisation du Travail Personnel de l'Etudiant (TPE) seront assurés par l'Enseignant. Ces guides décrivent la nature et la méthodologie à suivre pour la réalisation du TPE et le déroulement de l'examen. Ils peuvent également proposer un plan de travail pour les activités à réaliser dans les délais impartis.

C'étaient des points saillants du changement de la FEP en FOAD. Il est maintenant, au temps, de savoir le système de présence dans la distance.

III.2 La traçabilité de la présence dans la FOAD

Les processus de FOAD ont été établis en tenant compte, à la fois, de l'approche processus préconisée par les référentiels des normes ISO version 2015 et de l'observation de l'expérience de la FOAD Gestion. La transformation des besoins et des exigences des candidats au sein de la FOAD, en tant qu'éléments d'entrée, en satisfactions des diplômés, en tant qu'éléments de sortie, nécessite trois (3) principaux processus. Il s'agit du processus de management, du processus de réalisation et du processus support.

Schéma 4 : Modèle de cartographie des processus de FOAD Gestion

L'identification des besoins et des exigences en termes de flexibilité du temps et de l'espace du dispositif a été validé à 60% des enquêtés tandis que 75% ont exprimé leurs satisfactions à condition que la formation conduise effectivement à l'employabilité et à la créativité des sortants.

Pour ce faire, le processus de management a été justifié par les enquêtés. Ils ont affirmé à 75% que ce sont les Enseignants-Chercheurs qui peuvent assurer le pilotage et l'amélioration de tous les processus en faisant les interactions pédagogiques. Ces Enseignants-Chercheurs peuvent être à la fois concepteurs et tuteurs.

Dans le cadre du processus de réalisation, 52% des enquêtés ont opté pour le modèle CVS-T. Dans ce cas, il été demandé de placer chacune des activités de scolarisation, d'étude, de recherche et de contrôle de connaissance dans la roue de Deming. D'où, 60% des réponses sont pareilles, c'est-à-dire, étude (P), scolarisation (D), recherche (A) et contrôle de connaissance (C).

Au niveau du processus support, la réponse sur la question des interactions administratives et techniques est claire, il s'agit du PAT avec 51% de réponses, 20% préfèrent les enseignants et 29% pour les deux entités.

IV. DISCUSSIONS ET CONCLUSION

Dans le contexte du développement exponentiel des TIC actuellement, tout dispositif de FOAD suscite des débats non seulement sur le plan théorique mais surtout sur la disparité au niveau empirique. A l'issue des résultats de l'étude menée à la FOAD Gestion de l'Université d'Antananarivo, des points de vue peuvent être analysés afin de donner une piste de réflexion aux parties prenantes telles que les étudiants, les enseignants, les chercheurs, les tuteurs, le personnel administratif et technique, les décideurs au niveau de l'administration générale et même le public.

L'expérience de la FOAD Gestion sur le basculement progressif de la formation classique en présentiel vers l'utilisation du dispositif de la FOAD constitue une innovation et une amélioration dans le monde de l'enseignement supérieur à Madagascar. Le processus de réalisation de la « CVS-T» est d'une importance capitale dans la mesure où le système de management de la qualité est respecté. Faut-il rappeler que ce système CVS-T est une suite logique du système de GERIN-LAJOIE Serge (2011, pp.358-360)[12] tout en considérant la notion de « traçabilité » préconisée par la Norme Iso 9001 version (2015)[13]. Ce système présente des avantages considérables. Il permet d'assurer la flexibilité spatio-temporelle par rapport à la formation en présentiel. Comme D'HALLUIN Chantal et LOONIS Michel (1999,

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[12] Les modèles de FOAD sont le Modèle « Imprimé », Modèle « TV », Modèle « Électronique » , Modèle de cours en ligne avec apprentissage collaboratif et le modèle CVS

[13] Norme ISO 9001 VS 2015, Réf. 8.5.2 : Identification et traçabilité : L'organisme doit maîtriser l'identification unique des éléments de sortie lorsque la traçabilité est une exigence, et doit conserver les informations documentées nécessaires à la traçabilité.

pp. 108-109) l'a confirmé : « La règle des trois unités du théâtre classique (unité de temps, de lieu et d'action), qui régit de fait la majorité des formations présentielles (horaire fixe, salle permanente, mode d'action pédagogique unique), se trouve ainsi remplacée par celle des trois flexibilités des formations ouvertes : temps modulables, espaces variables, modes d'action différenciés. De plus, DESCHENES et MALTAIS (2006, p. 12) identifient d'autres intérêts de la formation à distance : « la formation à distance est une formation individualisée qui permet à un étudiant d'apprendre par lui-même, à son rythme, avec des contraintes minimales d'horaire et de déplacement, à l'aide de matériel didactique autosuffisant offert par différents moyens de communication et le soutien à distance de personnes   ressources ».

Cependant, il faut admettre que la FOAD dans l'enseignement supérieur, comme c'est souvent le cas pour les phénomènes en émergence, est caractérisée par plusieurs antagonismes importants [BERTRAND Isabelle (2003, pp. 77-78)]. L'étude menée au sein de la FOAD Gestion montre qu'il existe des lacunes à ne pas négliger telles que l'opposition au changement de la FEP à la FOAD et la difficulté de présence à distance. Cependant, l'étude expérimentale réalisée par GERIN-LAJOIE Serge   (2011, p.367) au sein l'Université de Laval a constaté trois principaux « facteurs-obstacles » au développement de la formation à distance. Il s'agit du manque de reconnaissance à l'égard des enseignants, de la résistance organisationnelle au changement et du manque d'expertise des enseignants et de l'équipe de soutien technique.

De plus, la FOAD est confrontée à un taux d'abandon important dû au sentiment d'isolement face à l'écran lorsqu'il est associé à la pratique de formation en solitaire. C'est en effet le constat fait par GLIKMAN Viviane : « L'isolement ressenti face aux outils, aux contenus, aux méthodes de travail et, surtout, face à l'institution, à   ses   formateurs   et   aux   autres apprenants   n'est   pas   toujours explicitement évoqué comme cause d'abandon, mais se lit aisément comme tel. » Selon la constatation de BACHY Sylviane (2013, p. 59), le pourcentage d'abandon est relativement élevé dans les formations en ligne. Pour le cas de la FOAD Gestion, ce taux est estimé à l'ordre de 65%. GAUTHIER (2001) a mis en évidence qu'en moyenne, 80 % des étudiants inscrits à une formation à distance abandonnent avant la fin des études. Pour lui, le plus grand problème de la formation à distance est à rechercher dans la motivation des apprenants.

Les intérêts sur la flexibilité spatio-temporelle qui poussent les étudiants à poursuivre leurs études en FOAD sont déjà mentionnées mais l'idée de flexibilité sans porter attention à la « présence à distance » pose un autre problème à résoudre. C'est la raison pour laquelle le concept de « traçabilité » dans le modèle « CVS-T » a été découvert.

Pour assurer cette traçabilité, le recours au système de management de la qualité de l'enseignement supérieur, en se basant sur les référentiels de l'ISO 9001 version 2015 ne doit pas être échappé. De plus, deux approches ont été proposées par GEBERS Erik, Michel Arnaud (2004, p.455) dont la première concerne les solutions gérées par ordinateur (en utilisant des Systèmes Tuteurs Intelligents par exemple) et celles utilisant une composante humaine (tuteur ou environnement collaboratif). Dans les deux cas, pour remédier au sentiment d'isolement face à l'écran, les concepteurs de formations proposent d'augmenter l'intérêt et l'attrait de la formation aux yeux

de l'apprenant (Ghezzi, 2004) : un rôle plus actif est donné à l'apprenant, accompagné d'une hausse de l'interactivité et de l'adaptabilité du contenu. La deuxième approche est axée sur le suivi de l'apprenant permettant d'identifier ses besoins en matière d'accompagnement pédagogique et ainsi d'instaurer une meilleure relation entre l'apprenant et sa formation, que cela soit réalisé par des rapports entre apprenants et tuteurs ou entre apprenants et la plate-forme de formation (Leroux, 2002).

Cependant, la concrétisation de la traçabilité au niveau de la FOAD nécessité une comptabilisation des heures. Dans ce cas, D'HALLUIN Chantal et LOONIS Michel (1999, p. 110) trouvent que dans une formation présentielle, la comptabilisation du temps de formation est chose simple, pour le formateur comme pour les apprenants : c'est la somme des heures passées ensemble. Il en va tout autrement en FOAD où les temps du formateur, de chaque apprenant, de la formation ne se recouvrent pas forcément. Il est donc nécessaire d'établir des règles strictes de comptabilisation des temps du formateur, de chaque apprenant, de la formation, et de veiller à une cohérence globale entre les différentes comptabilisations, notamment d'un point de vue financier.

Tout compte fait, le postulat sur la considération de la FOAD comme un moyen de développement de l'enseignement supérieur mérite une attention particulière. L'étude menée a permis de tirer que plusieurs avantages au profit des personnes et des entités sont offerts par la FOAD.

Dans cette optique, les bacheliers peuvent accéder et poursuivre leurs études supérieures à l'université. Le taux de participation ou de scolarisation à l'enseignement supérieur s'améliore davantage dans la mesure où les recrutements des étudiants s'avèrent être élargis. Les étudiants peuvent travailler avec une flexibilité dans le temps et dans l'espace. C'est une des solutions face au problème d'infrastructure à l'université, limitant la capacité d'accueil à l'université.

Les Enseignants – Chercheurs peuvent bénéficier du dispositif FOAD, vu sa caractéristique souple spatiale et temporelle. Ils peuvent réaliser une économie d'échelle sur le plan pédagogique tout en considérant le même programme que celui de la formation dispensée en présentiel (Parcours, Unités d'enseignement, éléments constitutifs, syllabus etc.) et le même système d'évaluation (Sujet et date unique d'examen) pour la FOAD et la FEP. Ils peuvent bénéficier également les spécificités de la FOAD par rapport à la FEP à travers la mise en ligne des cours (conception et mise à jour) et les travaux de tutorat.

Au niveau de l'Administration générale, la FOAD GESTION s'inscrit dans la politique nationale de l'Enseignement Supérieur à Madagascar[14] dont « promouvoir l'adéquation, la recherche, le

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[14] Plan National pour le Développement (PND) 2015-2019, Programme n °4.4 : Enseignement supérieur innovant et adapté aux besoins de la société, p. 65

développement, l'innovation et la promotion d'une université numérique» constitue l'une des orientations stratégiques. Dans ce cas, nombreux sont les impacts et les retombées de la FOAD au niveau de l'économie malagasy, entre autres : (1) La diminution considérable des dépenses de l'Etat car les étudiants ne bénéficient ni de bourse d'études ni de logement universitaire, étant donné que la majorité du temps de travail des étudiants se fait chez eux ; (2) L'augmentation du nombre des gestionnaires sortants de l'université plus compétitifs, créatifs et employabilité dans plusieurs secteurs porteurs de développement de Madagascar ; (3) L'économie du temps et du frais de déplacement des étudiants ; (4) L'amélioration de la qualité de l'enseignement supérieur à travers la promotion de l'université numérique à Madagascar.   (5) La résolution du problème logistique affectant la capacité d'accueil en absorbant une grande partie des bacheliers non admis au test d'accès.

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ARTICLE SCIENTIFIQUE N°2

OPPORTUNISTIC BEHAVIOUR AND SHAREHOLDING OF COMPANY DIRECTORS

Résumé l'article n°2:

ACTIONNARIAT DES DIRIGEANTS ET COMPORTEMENT OPPORTUNISTE

L'actionnariat des dirigeants constitue l'une des meilleures solutions pouvant résoudre l'existence des conflits d'intérêts existant entre les actionnaires et ceux qui sont mandatés pour gérer l'entreprise. L'étude empirique relative à une trentaine de société de capitaux menée dans le cadre de cet article a permis de valider cette hypothèse dans un contexte malagasy : plus la prise de participation des dirigeants dans le capital augmente, plus leur comportement opportuniste diminue. La théorie de l'alignement des intérêts est vérifiée pour une prise de participation inférieure à 15%, mais au-delà de ce taux, elle ne l'est plus.

Mots clés : Gouvernance d'entreprise, actionnariat des dirigeants, sociétés de capitaux, comportement opportuniste.

Certificat de publication de l'article n°2:

Research Article

OPPORTUNISTIC BEHAVIOUR AND SHAREHOLDING OF COMPANY DIRECTORS

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ARTICLE INFO	ABSTRACT
	Management shareholding is one of the best solutions to resolve the existence of conflicts of interest between shareholders and those mandated to manage the company. The empirical study of some thirty capital companies conducted for this article has made it possible to validate this hypothesis in a Malagasy context: the greater the participation of managers in the capital, the more their opportunistic behaviour decreases. The theory of alignment of interests is verified for a stake of less than 15%, but above this rate, it is no longer verified.

INTRODUCTION

Nowadays, the intensity of conflicts of interest between owners and those mandated to run the company has increased significantly in the face of the complexity and development of information and management systems around the world. Conflicts between shareholders and managers are at the centre of this system and the ideal situation that would suit everyone would be one that would align these interests and reduce conflicts as much as possible. A number of researchers have worked on this subject, including JENSEN and MECKLING (1976), and have concluded that one of the best solutions is for managers to acquire a stake in the share capital of a company. We wanted to apply this theory to the Malagasy context and that is why the topic of management shareholding and opportunistic behavior was addressed.

The research theme mentioned above has led to the following problem: To what extent does the participation of managers in the social capital of companies reduce their opportunistic behaviour? In order to do so, a hypothetical-deductive approach based on the case of some thirty capital companies based in Madagascar was used. A questionnaire containing about forty questions was drawn up using the SPHINX PLUS 2 software, which allows correlation tests to be carried out in order to validate the hypothesis: "the more the participation of managers in the capital increases, the more their opportunistic behaviour

decreases". Thus it will be treated successively in this article, materials and methods, results and discussions.

MATERIALS AND METHODS

Literature review

Opportunistic behaviour of the leader can be defined as behaviour that consists of seeking his or her personal interest through cunning and various forms of cheating and fraud. Opportunism is based on incomplete, distorted or falsified disclosure of information by an agent, including information about his or her abilities, preferences or intentions, and thus on the existence of information asymmetries between agents" (Coriat and Weinstein, 1995). "Opportunism means cheating and transgression of ethics" (Williamson, 1985).

The problem of "opportunistic" managerial behaviour has its roots in the work of Berle and Means (1932) in their book The Modern Corporation and Private Property. The emergence of conflicts of interest is the central theme of their work, where they note that the dispersion of ownership among an increasingly diffuse shareholder base has caused a great separation between the ownership function of the firm and the control function. The separation of the ownership and management functions is the source of divergences of interest in the management of the company, which turn into a conflict of interest. It pits shareholders against managers in the

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divergent appreciation of decisions or policies carried out by managers. They are recurrent. This opposition is due to the fact that each group tries to maximise its own usefulness to the detriment of the other, which leads to conflicts between owners and managers. (Derhy, 1997). This is the case of the agency relationship (Jensen, Meckling, 1976), which covers not only the relations shareholder-managers but also all those where there is a delegation or mandate and formal or tacit contract, i.e. a relationship between a superior and subordinate or a customer and his bank or a doctor and his patient or a student and his teacher

The agency relationship is problematic in the first instance when the interests of the two parties diverge, which is the case when one considers that each seeks to maximise his or her personal interest. Then when information is imperfect and in particular when there is an asymmetry of information between the parties, which is also the general case.

In this context, the principal or principal is confronted with two types of risks due to the behaviour of the agent or mandatary. The first type of risk is called ex ante opportunism. The agent generally has more information than the principal, so a CEO is better informed about the company than the shareholder. The agent will take advantage of this information to make an adverse selection, in particular by adjusting the contract between him and the principal to his advantage;

The second type is known as ex post opportunism. In this case, the agent will use his best information or powers to circumvent the contract or mandate. This is also known as moral risk or moral hazard.

The conflict of interest between managers and shareholders also results from their strategic differences in their relationship with the company, according to studies by Jensen and Meckling (1976) and Fama (1980)on :

The opposition between the investment made by the shareholder and the management exercised by the manager. In other words, the opposition between financial capital and human capital. The first brings its resource in a perspective of optimum valuation with a consequent taking of risks, while the second carried by a strategy of conservation of its position favours a less risky investment, therefore better controlled but less important profits.

The inscription of the two protagonists in two different perspectives of valuation of their own interests. The manager trying tomaximise his own usefulness in the company through investments in line with his ambition to increase his notoriety and to keep the benefits in kind (company cars, business trips and meals, private club, etc.), which are a source of increase in the company's expenses; whereas the shareholder favours maximising the value of the firm and maximising the potential of its assets for an optimum valuation of his investment with a parallel reduction in expenses. Thus the value of the financial capital, which represents the share, is reduced by the share of all these advantages added to the bonus that managers grant themselves in return for their human capital.
- The differing assessment of the duration of the existence of each of the two players in the company and the profitability of their respective presence. The manager's random presence, linked to the company's performance, will tend to favour short-term investments whose profitability is better controlled in

order to align them with the periods during which his performance is evaluated.

These various elements of conflicts of interest can lead managers to adopt fraudulent behaviour.

According to the Institute of Internal Auditor (ITA) and the Association of Certified Fraud Examiners (ACFE), fraud is the deliberate deception of others to obtain an improper benefit, or to circumvent legal obligations or organizational rules. Fraudulent behavior therefore involves a factual and intentional element as well as a process of concealing the unauthorized act (IFACI, 2010). According to the French Institute of Audit and Internal Control (IFACI), fraud can be defined as any illegal act characterized by deception, concealment or breach of trust without violence or threat of violence. Fraud is perpetrated by individuals and organizations in order to obtain money, goods or services or to secure personal or commercial advantage (IIA/IFACI, 2009).

Fraud can originate from a single individual, a group of individuals or an organization that may be internal or external. It may be an act of a prohibited nature or an intentional omission. When we speak of fraud we have in mind malicious acts where the actor tends to deceive others by lies and falsifications, of any kind, in order to acquire an irregular profit in the form of personal or commercial advantage.

The fraudster may not be pursuing material profit, but seeking personal recognition to satisfy his ego, protecting the interests of his organisation by falsifying accounting documents, making false tax returns or, if necessary, resorting to corruption to obtain advantageous contracts or to preserve the reputation or market share of his company.

For example, fraud, which could involve managers, can take the form of the following acts

Conflicts of interest: the executive is involved in interests with a partner of the company that may influence its decisions, anti-competitive agreements, insider trading (use of confidential information in securities transactions).

Corruption: bribes and kickbacks, dispersal of sensitive information, agreements with a supplier or customer.

Abuse of company assets: fraudulent use of company resources for personal purposes,

Manipulation of the financial statements: fictitious entries or omission of accounting records.

Communication of fraudulent information: false supporting documents, false services invoiced to the company, undervaluation of charges, overvaluation of assets, undervaluation of debts.

Computer fraud: manipulation of information.

Nevertheless, not all individuals are opportunists, and sometimes only some are. It is a priori impossible to distinguish opportunists from others. One cannot rule out the possibility of opportunistic behaviour on the part of the Leader. However, the reality of corporate life has shown through various examples that these perceptions of opposite and conflicting departures have been transformed and brought closer together under the effect of the evolution of the elements of appreciation, a consequence of the pressure of the constraining mechanisms, of

corporate governance, which leads to a discernment between opportunistic and potentially conflicting behaviour.

Thus the conflict of interest is always present and leads to a distortion of the objectivity of control, through the mechanisms of corporate governance, because of this "a priori" which would imply fundamentally opportunistic human behaviour (Donaldson, 1990).

According to Berle and Means (1932), the company should cease to have as its sole objective the maximisation of shareholder value, since shareholders in managerial companies are only passive players in ownership, and they should not be the only ones concerned with the appropriation of the profit generated. And that, consequently, the company must adopt a partnership approach that must take into account the interests of all stakeholders (Charreaux, 2004).

Even Williamson, in 1999, in his acceptance of the concept of the cognitive-strategic approach to governance, revised the narrow nature of his own explanations of the leader's behaviour, usually placing it within a disciplinary and contractual vision.

But in the face of these divergences if the interests of the agent and the principal are identical or convergent, the moral hazard of Jensen and Meckling (1976) is eliminated, and the agent's opportunistic behavior will decrease. These two authors argue that the greater the participation of managers in the firm's capital, the greater the firm's value and performance. The development of stock options, i.e. stock options, employee profit-sharing or employee share ownership are the most common and obvious manifestations of this. This development in the modification of the shareholding structure has been apparent since the end of 1989, starting in the United States. This change in share ownership has affected both its composition and its behaviour (Derhy, 1997).

In theory, management and employee shareholding makes it possible to align the interests of these players with those of the shareholders. The manager or the employee shareholder will thus be motivated to maximize the value of the company, and limit value-destroying decisions (alignment theory). However, when his shareholding increases, the manager can exert an influence on the governance of the company. He is then in a position to take private profits, in the form of excessive remuneration or benefits in kind. It may also adopt a strategy of entrenchment by anaesthetizing governance mechanisms such as the board of directors, the executive labour market or the takeover market (Mork, Shleifer and Vishny 1988). This entrenchment strategy reflects the desire to retain power and control over the company.

Several studies seem to indicate a non-linear relationship between executive shareholding and firm performance. The association is initially positive, but the link between executive shareholding and performance is negative at a certain level of executive ownership. This relationship has been observed by Han and Suk (1998), Mc Connell and Servaes (1990) in the United States, as well as Craswell *et al* (1997) in Australia and Hu and Zhou (2008) in China. Similar relationships, although more complex, are obtained by Morck *et al* (1988) and Hermalin and Weisbach (1991). In the Spanish context, Alonso-Bonis and Andrés-Alonso (2007) find that directors'

shareholding is positively associated with performance, and seems to ensure better control of the firm.

Several researches have analysed the link between employee ownership and company financial performance. Hollandts and Guedri (2008) find a positive relationship in a sample of 150 French listed companies. Ginglinger *et al* (2011) also observe this positive relationship on companies in the SBF 120 index for employee ownership values below 3%. On the other hand, when employee ownership exceeds 10%, the relationship with financial performance appears negative. Similarly, Kim and Ouimet (2014) observe in the United States that small employee share award programs (less than 5% of capital) have a positive impact on company shareholder value, while larger programs have more mixed effects. A non-linear relationship is also observed in the United Kingdom by Florackis *et al* (2009). They show an alignment effect for executive share ownership values below 15%, whereas no relationship with financial performance is observed when executive share ownership is high.

Faced with this literary context, we have conducted empirical studies to verify whether these assertions are true in the Malagasy context. We have therefore adopted a positivist approach

This research was carried out in a Malagasy context following a hypothetico-deductive approach and the following hypothesis was put forward: the more the manager's share in the company's capital increases, the more his opportunistic behaviour decreases.

A sample of some thirty limited companies was included in this study, since they are constituted with consideration of the capital contributed by the partners or shareholders and make it possible to easily assess the manager's participation in the ownership of the companies concerned. Among the capital companies are public limited companies (S.A.), single-person public limited companies (S.A.U.), limited liability companies (S.A.R.L.) and single-person limited liability companies (S.A.R.L.U.). The 30 companies that responded favourably to the survey questionnaire are divided as follows: 12 public limited companies (SA) and 18 private limited companies (SARL). These companies operate in the services sector in order to isolate certain effects that could compromise the results of the analyses and to homogenise the conclusions.

A survey was carried out among the sample of companies thus defined and the questionnaire drawn up under the SPHINX PLUS 2 software consists of about thirty questions divided into two main parts. One part concerns general information on the company, which is made up of questions of a general nature such as : company name, legal status, main activity, sector of activity, age of the company, share capital, shareholding structure... Another part includes financial aspects focusing mainly on the formation of turnover and results achieved.

Two variables were cross-tabulated in this study to validate the above hypothesis. The first concerns the level of the manager's participation in the company's share capital and the second measures the margin rate. The latter, defined as the ratio between the company's results and its turnover, was chosen particularly insofar as it makes it possible to assess the level of conflict of interest between managers and shareholders and

subsequently the opportunistic behaviour of executives. Indeed, the manager tries to maximise his utility function for the highest possible turnover while the shareholders seek tomaximise the value of the company for a higher result. The higher the margin rate, therefore, the better the governance, the less opportunistic behaviour and the shareholders are reassured. Otherwise, there would be opportunistic behaviour on the part of executives to the extent that certain expenses related to their personal needs are inflated. Managers would not seek to maximize profit but rather the firm's sales, they tend to maximize the value of the firm's sales rather than profit (W.J. Baumol, 1990). Moreover, several studies have shown that their revenues are more closely correlated with sales than with profit. A high level of turnover benefits the manager more in terms of prestige than profit, which essentially remunerates the shareholders.

A first way for them to divert profits from the company is to grant themselves multiple benefits in kind as well as significant emoluments. Executives have significant discretionary power and control many expenses that satisfy their desires for income, prestige, power and security.from which they derive direct satisfaction (Williamson O. E., 1999).

A high turnover reflects a strong market share giving managers significant negotiating power. They thus push back the risk of new competitors entering the market and reduce the risk associated with managing the company. Managers derive value satisfaction from the firm's total revenues. They therefore maximize a utility function whose only argument will be the turnover, to the detriment of the profits sought by the shareholders.

Shareholders, on the other hand, seek to maximize the value of the company and hope that the company will be able to generate more profits in line with the remuneration of their financial contributions. In view of the above, the margin rate is therefore an important indicator of the level of conflicts of interest between management and shareholders.

The Survey Population was stratified into five homogeneous groups. Two variables were analyzed. On the one hand, the variable "P", which represents the percentage share of the executive in the social capital represented by the workforce :]-∞; 0],]0 ;5] ;]5 ; 10],]10 ;15] ;]15 ;20] ;]20 ; 25]. On the other hand, there is the margin rate variable "T", the terms of which are represented by the numbers of employees below :]0 ; 5] ;]5 ; 10] ;]10 ; 15] ;]15 ; 20] ;]20 ; 25]. A Pearson independence test on these two variables was conducted to identify the level of correlation that might exist between them and to validate the hypothesis posed at the beginning of this article.

RESULTS

The quantitative information gathered from the survey questionnaire made it possible to calculate the margin rates and to establish a first trend. This made it possible to construct a cross-analysis grid to check whether there was indeed a relationship between the share of capital held by managers and their opportunistic behaviour. The chi-square calculation or Pearson's independence test rated "x^2" was subsequently carried out. It allows us to know whether there is a relationship

between two variables and is done in stages. The following table was derived from the questionnaire analysis.

Table 1 Cross tabulation of staff numbers

PT	]-∞; 0]	]0; 5]	]5; 10]	]10; 15]	]15; 20]	]20; 25]	TOTAL
]0; 5]	3	0	0	0	1	1	5
]5; 10]	1	3	2	1	1	2	10
]10; 15]	0	3	3	1	1	0	8
]15; 20]	0	1	2	3	0	0	6
]20; 25]	0	0	0	1	0	0	1
TOTAL	4	7	7	6	3	3	30

Source: Authors

Respondents' responses to the questionnaire can be analysed in three steps. The first concerns the case of four enterprises with a zero participation in the capital of the directors. The second relates to a participation ranging from 0 to 15% and the third to a participation exceeding 15%.

For the first four companies where managers have no shares, the margin rates recorded are at the lowest end of the scale. The ¾ are below 5% and the rest are between 5% and 10%. This situation clearly reflects the opportunistic behaviour of managers who are more concerned with high turnover to satisfy their own utilities to the detriment of the profits made, on the basis of which the cash flow capacity will be calculated. Dividends to be distributed to shareholders or partners will, in fact, bededucted on the basis of the cash flow and a number of elements including the payment schedules of debts and future investments to be made.

Fixed charges and in particular wage costs are inflated at the level of these companies. Indeed, managers offer their employees and staff extra pay and many different types of benefits. The number of individuals recruited also proves to be disproportionate to the real needs of the company insofar as managers seek instead to satisfy their desire to command as many individuals as possible and to satisfy their needs for prestige and esteem: confidence and self-respect, recognition and appreciation of others (MASLOW Abraham, 1943).

It is also noted for these four companies the existence of certain expenses that do not have a direct impact on the realization of profits, but which satisfy the usefulness of the managers and reflect, in a way, their opportunistic behavior. This is the case for the financing of sponsoring activities and activities of a more social nature. Even if the amount is not really significant in relation to the total expenses incurred, the managers of these companies are more sensitive to financing these activities.

As soon as the managers acquire a stake in the capital, a significant increase in margin rates is recorded. For the seven companies with management shareholdings of between 1% and 5%, six of them achieved a margin rate of between 6% and 15% and one of less than 20%. Similarly, there was a marked increase in the margin rates for the 6-10% and 11-15% tranches of equity holdings, and the higher the level of equity holdings, the higher the margin rates. The latter even reached more than 20% for a participation between 11 and 15%.

The improvement in margin rates means a clear improvement in the management of the company and a good control of expenses and consequently a less opportunistic attitude on the part of management. In most of the 20 companies concerned, fixed costs, including wage costs, are reduced to a minimum

threshold in order to keep the company safe from risks. According to the replies to the questionnaire, managers are less sensitive to activities that are not directly linked to the financial profitability of the company, and it can thus be stated that there is an alignment effect for managers' shareholding values below 15%.

For the third and final tranche of shareholdings of between 16 and 25%, there was a sharp fall in the margin rates, which this time fell to less than 15%. And for the participation between 21 and 25%, the margin rates could not even exceed 10%. This new situation leads to the conclusion that from a 15% shareholding onwards, the margin rates fall and the behaviour of the managers changes again and no longer follows the previously mentioned hypothesis.

This situation leads us to carry out the correlation test in two steps. The first relates to an equity investment below 16% and the second relates to an equity investment below 26%. Since the questionnaire was drawn up using SPHINX PLUS 2 software, the data processing in this respect was carried out automatically.

For the first case where P is between 0 and 15%, the calculated Chi 2 was 24.4 with a degree of freedom of 12 and an uncertainty coefficient of 2%. If the uncertainty coefficient is assumed to be equal to 5%, the Chi 2 in the table is equal to 21.03. Since the calculated Chi 2 is higher than that of the table, it can be concluded that there is a correlation between the share of shares owned by managers and the margin rate: the higher the shares, the higher the margin rates, which allows us to state from a transitivity relationship that the opportunistic behaviour of managers decreases according to their participation in the company's share capital. The initial hypothesis is therefore validated.

In order to assess the degree of correlation existing between the variables cited in the hypothesis, it was necessary to calculate Cramer's V. The closer this indicator is to 1, the stronger the correlation. In our case, it is equal to 0.58 higher than ½, which leads us to conclude that there is a strong dependency between the acquisition of management interests in the company's capital and their opportunistic behaviour.

The theory of alignment is therefore verified for this first case. The managers, once in possession of a certain number of shares, feel more secure in their jobs and try to prove to the shareholders the benefits of the decisions taken regarding their integration among the owners. The feeling of belonging to this group thus pushes them to align their interests with those of the shareholders, which reflects the good results obtained in the modalities considered in this first case.

In the second case, where the directors' equity interest is between 0 and 25%, the same analysis approach was adopted. The results of the Chi 2 Test were as follows: The calculated Chi 2 is equal to 26.91, the degree of freedom to 20 and the degree of uncertainty to 13.8%. If the latter is assumed to be 5%, the Chi 2 read from the table is equal to 31.41.

Since the calculated Chi 2 is much lower than the theoretical Chi 2, the dependence between the two variables is not obvious. The initial hypothesis is no longer verified for all modalities. The correlation test confirms the analysis of the answers provided by the respondents carried out previously.

From a shareholding of more than 15% in the social capital, a rather opportunistic behaviour of the managers is recorded.

DISCUSSIONS

Several reflections have been made in relation to this unstable behaviour of managers. Not only is it no longer a question of them having a stable position within the company, but the level of shareholding gives them the power to bypass the control markers put in place within the company, and we are talking about the theory of the entrenchment of managers.

The rooting thesis was developed by A. Shleifer, R.W. Vishny and R. Morck (1989). It questions the foundations of contractual theories in general and agency theory in particular. This theory seems to offer an appropriate framework for the analysis of managers' opportunistic strategies and their consequences on control systems and corporate performance. Managers thus adopt strategies that make them indispensable in the eyes of shareholders (Parrat Frédéric, 1999). In this respect, managers play a key role in certain areas, including the following:

Idiosyncratic (or executive-specific) investments: Investments are said to be idiosyncratic or executive-specific if their replacement leads to a loss of value for shareholders. Making these investments allows executives to reduce the risk of being replaced. They thus obtain higher compensation in the form of salaries or non-monetary benefits and increase their decision-making latitude.

Manipulating information: By playing on information, executives seek to increase their discretionary latitude in order to appropriate the maximum amount of annuities while avoiding being revoked. In fact, executives increase their value in the labour market by investing in projects whose profitability depends on specific information controlled by executives, or by investing in activities characterized by greater information asymmetry. This strategy amplifies the uncertainty perceived by rival management teams, which will thus have less incentive to replace current executives.

The control of resources: Managers know that it is in their interest not to depend on external resource providers on the one hand and on the other hand, to represent themselves a factor of production that is difficult to substitute. This is why they opt for self-financing and recourse to capital increases with new shareholders. This allows them to escape the discipline exercised by existing creditors and shareholders.

Relationship networks: The manager will try to build a relational network with his collaborators and with the employees, by granting a lot of benefits in kind or overpayments, as well as by promising abundant promotions. This often leads to increasing the size of the firm and the number of hierarchical levels. Employees will then have an interest in ensuring that the manager is not replaced, and may even work to keep him/her within the organization. The Manager may also establish relations with the directors or favour a rooting based on the shareholder relationship network, by linking relations with one or more groups of shareholders or by increasing as much as possible his participation in the capital of the company he manages.

CONCLUSION

Executive shareholding is currently an important area of debate for corporate governance researchers. It calls into question the foundations of contractual theories in general and agency theory in particular. This theory seems to offer an appropriate framework for the analysis of managers' opportunistic strategies and their consequences on control systems and corporate performance. The empirical study carried out in this sense in a Malagasy context concerning some thirty capital companies and in particular the tests established have indeed demonstrated the existence of a strong correlation between the level of participation of managers in the social capital of a company and their opportunistic behaviour: the more the degree of participation increases to the limit of 15%, the more opportunistic behaviour decreases. Above this rate, the assumption is no longer valid and the executive will tend to take root.

This article has tried to highlight the logical relationship between company performance and the notion of good governance and it has been shown that the acquisition of up to 15% of the capital by managers allows the interests of managers to be aligned with those of shareholders and this is the ideal situation. The writing of this article leaves other research questions for management science researchers but employee share ownership seems to be of particular importance as employees are part of the set of stakeholders where sources of conflict reside.

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ARTICLE SCIENTIFIQUE N°3

THE SYSTEM OF COOPERATION OF ACTORS IN OPEN AND DISTANCE LEARNING.

Résumé l'article n°3:

SYSTEME DE COOPERATION DES ACTEURS DANS LA FORMATION OUVERTE ET A DISTANCE

Le présent article a pour objet de montrer le mécanisme de coopération au niveau du personnel enseignant, des étudiants ainsi que du personnel administratif et technique en tant que trois principaux acteurs de la formation ouverte et/ou à distance (FOAD). La démarche d'observation participative réalisée au sein de l'organisation de la FOAD en sciences de gestion à l'Université d'Antananarivo (Madagascar) a permis de faire sortir le résultat de la configuration de la coopération communautaire – organique basée sur l'identification sociale et la solidarité. La plateforme de FOAD constitue un dispositif fondamental permettant d'assurer le fonctionnement de la coopération entre les parties prenantes.

Mots clés:

Coopération, interaction des acteurs, Formation ouverte et/ou à distance, Gestion, Organisation

Certificat de publication de l'article n°3:

THE SYSTEM OF COOPERATION OF ACTORS IN OPEN AND DISTANCE LEARNING

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ABSTRACT

The purpose of this article is to show the mechanism of cooperation at the level of teaching staff, students and administrative and technical staff as the three main actors in open and/or distance learning (ODL). The participatory observation approach carried out within the ODL organization in management sciences at the University of Antananarivo (Madagascar) has made it possible to bring out the result of the configuration of community - organic cooperation based on social identification and solidarity. The ODL platform constitutes a fundamental mechanism for ensuring the functioning of cooperation between stakeholders.

1. INTRODUCTION

Nowadays, open and/or distance learning (ODL) is an unavoidable orientation in the university world due to its international expansion (Batime C. & Weber E., 2007). This training system allows a student to learn, alone or in collaboration, with different means of communication and distance support from people - resources (Gérin-Lajoie Serge, 2011). The definition given by AFNOR shows ODL as a training system designed to allow individuals to train without going to a training location and without the physical presence of a trainer.

Therefore, it is necessary to consider the ODL as a flexible training device in time and space. This idea of flexibility characterizes the considerable change in the ODL from traditional face-to-face training. That is to say, the transition from a state of knowledge transmitter (in traditional training) to that of facilitator of knowledge building in ODL requires a whole change in the professional identity of the trainer, because he is no longer the main agent who d i s p e n s e s knowledge but rather a catalyst. According to Denis B. (2003), the shift from face-to-face to distance training is upsetting all the roles of the actors.

In view of the distance in space between all the players in the ODL, the cooperation mechanisms play a primordial role for the proper functioning of the system in order to transform the input elements into output elements (according to the ISO standards version 2015). From this perspective, the group is considered as a center for analysis of cooperation because higher education students are frequently invited to work in groups to acquire knowledge (Laurent Cosnefroy and Sonia Lefeuvre, 2018). Theoretical developments in group movement show that

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the group with which it identifies is called the "ingroup", or home group, while groups in which it does not integrate constitute the "outgroup" (Elsbach, 1999). The question is: what is the mechanism of cooperation in the group? In order to find elements of answers, the construction of cooperation in a group will be shown on the basis of the analysis of two experiments.

The first concerns the research carried out by Moreno Jacob called "sociometry". This psycho-sociologist gave the name "sociometry" to a method capable of measuring relationships of sympathy and antipathy that may exist within a group. This technique consists of asking each member of the group to identify those they would choose as friends, neighbours or collaborators. Once the data are collected, a sociogram can be drawn up that summarizes the relationships within the group in a figure. This represents the rejections, divisions or conflicts that mark the internal dynamics of the group. Monie Roger (1986) associates himself with the research initiated by Moreno Jacob when he says that specific instruments had to be found for the study of groups that could illustrate their anatomy and psychology, sociometry came at the right time with its group instrument: the sociogram. The latter thus constitutes a graphic representation of the relations within a group established on the basis of the sociometry method, which is considered to be a technique for observing the cooperation of actors within a group. Consequently, the cooperation of group members is particularly highlighted in the analysis of "sociometry".

Lewin's experience with Training group (or T. group)" concerns the second application. The group is part of Lewin's field of research. He experimented with it in 1946, first by accident, then systematically, by centering small groups on themselves, giving no other object to their common work than the study of their own existence and evolution. The T. group, also known as a diagnostic group, is a group closed in on itself, isolated from the outside world, without a leader, an organization or a program, which has no other object than to exist, on an experimental basis, for a few days (Monie Roger, 1986). This technique ranges from individual utopia to collective organization. According to Marion Stéphane and Senicour Patrick (2003), the creation of an organization takes place along a continuum starting from the emergence of the idea, which is by nature immaterial, in the mind of the individual promoter or in a small team. The aim is to achieve, after certain periods of time, the social organization constituted by the cooperative relationship. Thus, Lewin's "T. group" shows that the constitution of cooperation is unpredictable, but experience has shown that it is full of energy.

Following the analysis of these experiences, the mechanism of interaction of the actors in the group at the ODL level plays a key role. This system of interactions appears to be the basis of the concept of cooperative learning. It is a pedagogical device that consists of having learners work in groups small enough that each one has the opportunity to participate in a collective task that has been clearly assigned. In addition, groups of students are expected to complete the task without the direct and immediate supervision of the teacher (Bourgeois, E. Nizet, J., 2005). Yet the interaction between actors in distance education may be limited in comparison to face-to-face teaching at the same time and in the same place. (Jacques Wallet, 2004). Faced with this limitation, how can cooperation between the actors of the ODL be ensured? The issue is not only theoretical, it is also methodological. While it is more usual to study communication practices within the relatively limited framework of a given system, such as a digital campus, a Moodle-type platform or a discussion forum, it is methodologically delicate to study interactions when the instruments are not known a priori. (Cédric Fluckiger, 2011).

There are several instruments for cooperation in the group. First of all, the ODL platform is the inevitable tool in distance learning. This software allows the administration of cooperative relations between technical, administrative and pedagogical actors. In addition, it provides a harmonized framework and a means of determining the traceability of the actors' activities through the management of registrations, production and dissemination of courses, tutorial support, pedagogical monitoring and evaluation. The main interest of a platform is to provide distance learning, asynchronously and with permanent access for several users.

Secondly, Serge Gérin-Lajoie, Claude Potvin, (2011) proposes teaching materials from a digital disc or a course website. They are offered slightly more varied learning activities. For example, it is possible to visit websites, do online exercises (quizzes) or simulations and participate in   exchanges by   e-mail or   forum; these   tools   are also   used for coaching. Although the majority of learning activities in such courses are asynchronous, cooperation is easier to organize.

It is indeed a question of giving the actors the opportunity to appropriate the digital worlds and to see how digital tools can enable them to appropriate the world. (Stines Marielle S., 2017). Digital technology is not only an educational object, it is also a tool that can be used in the service of education. Successful experiments combine at least three key elements in each case (Hélène Grimbelle and Antonin Cois, 2017). First of all, they really involve the

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cooperation of the actors in the educational team, if possible as soon as the desired material is defined (i.e. they propose a preliminary analysis where uses are anticipated). Then, they accompany and train these same teams in their use. Finally, they are monitored, evaluated, and focus on the conditions for the maintenance and renewal of the equipment. According to other authors (Martine Cauvin and Jacques Lacombe, 1999).The implementation of a so-called "virtual" approach requires a set of tools and services to be made available to the academic community. The main functions to be assumed concern the management of learning (organizing, negotiating pathways), content (creating, distributing, accessing resources) and cooperation between stakeholders, whether they belong to the teaching or learning community.

Furthermore, the tool via social networks is considered a digital space for cooperative learning, both formal and informal (Nahla Aljerbi, 2015). Students support the idea of using social networks in an institutional context as a tool for formal cooperation with their teachers, especially when the number of students is high and student-teacher interaction is so necessary. Social networks are often used as a means of cooperation to foster student-student and student-teacher interactions (Bowman, N. D. & Akcaoglu, M, 2014).

Indeed, there are many instruments to ensure interaction between the ODL actors. However, it is necessary to go further in the search for configurations of cooperation between the actors, more particularly at the level of the ODL.

2. MATERIALS AND METHODS

To know the reality on the ground, an organization already operational since the 2015 academic year, within the Faculty of Economics, Management and Sociology of the University of Antananarivo (Madagascar) was chosen as the empirical study area. This is the Open and Distance Learning in Management Sciences, called Management ODL. It is part of the national plan for the development of higher education in Madagascar, of which the promotion of the digital university is one of the strategic orientations designed by the State. This pilot project in the field of Social Sciences enables graduates of the public university to be competitive, creative and employable in the country's economy. It contributes to increasing the rate of access to higher education, which is estimated at less than 5% in Madagascar compared to about 8% to 20% in sub-Saharan Africa (according to UNIESCO). However, there are many advantages of ODL, among others: (1) A considerable reduction in State expenditure as students do not benefit from scholarships or university accommodation since most of the students' working time is spent at home; (2) An increase in the number of managers leaving the university in several sectors that contribute to the country's development; (3) Savings in students' time and travel expenses; (4) Improvement in the quality of higher education through the promotion of the digital university.

The main objective of the organization studied is to provide learners with training that is both academic and professional. On the one hand, it aims at the operationality of the students, eventually allowing them to integrate the professional world; and on the other hand, the pursuit of research training in Management Sciences to specialize in business management and administration, marketing and international trade, finance and accounting, auditing and management control, allowing the integration of the learners in high-level managerial activities.

Faced with these different opportunities, the characteristics of the actors' cooperation were studied through the form of cooperation within the ODL organization. The shift from the concept of vertical cooperation (according to the classical school) to transversal cooperation (concept of the school of human relations) leads to the search for the mechanism of community - organic cooperation in the organization of training. It is a space of consensus, integration, protection, in which all the actors wished to enter in order to live fully with others and share a common culture and values, according to Fiol Michel, Jordan Hugues, Sullà Emili (2004). The concept of the so-called communitarian-organic cooperation has been studied through the constitution of social identification and the need for solidarity of the actors in a platform. Moreno Jacob's sociometry method was considered in order to determine the cooperation through the functioning of the group as well as the relations of sympathy and antipathy between the actors. In addition, Lewin's approach to the T. group made it possible to analyze the system of cooperation in the absence of teaching, administrative and technical staff during the student's personal work (SPW).

However, it should be remembered that the functioning of the body is a concrete example highlighted by Fiol Michel, JORDAN Hugues, SULLÀ Emili, (2004) to explain the community - organic cooperation. The organs of a body are both differentiated by functions and highly interconnected and united in their purposes. By analogy, the body is the organization of the ODL. According to Livian (1998): An organization is a system whose dynamics are the result

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of interactions between a functional structure, human and physical resources and management systems, formal and informal, and whose efficiency can be measured by its ability to meet objectives. It is therefore in the organization of ODL that there are several groups of students, teaching staff and administrative and technical personnel who work at a distance according to different objectives.

The data were derived from participatory observation according to the approach of Lapassade, G. (2002). This observation made it possible to collect internal data in order to know the real situation experienced in the organization. Thus, the participation of 66 persons, legally registered at level 1 in License (L1) at the ODL during the 2018/2019 academic year, made it possible to know the mechanisms of cooperation at the ODL of the University of Antananarivo. It must be admitted that this sample is limited to about 11.5% of all students, more precisely, 66 out of 573 individuals. For this purpose, all students enrolled in L1 were divided into groups of 50 individuals according to alphabetical order. Indeed, 11 groups of 50 students and 1 group of 23 students were formed. The latter group was not taken into account in the present research because of the insufficiency of the previously defined number of students and especially in order to avoid misinterpretation of the results obtained. An observation guide was sent to the 6 individuals in each group, resulting in a sample size of 66. The observations were based on the cooperation mechanisms between the different actors of the ODL both upstream and downstream, and even at the intermediate level. However, the approach of researching the configuration of cooperation processes within the ODL was adopted according to the Doz Y approach. (1996) on the definition and transformation of actors while considering the systems of objectives of these stakeholders. In the case of ODL, the process-based models on cooperation between teaching, administrative and technical staff and students thus describe feedback loops endogenous to the process and comprise three phases in the cooperative process of definition (without objectives), transformation (individual objectives) and reconfiguration of cooperative relations (common objectives). This phenomenon of "cooperation" is reflected in particular in the system of alliances between actors.

3. RESULTS AND DISCUSSIONS

Following the observation within the organization of the Management ODL of the University of Antananarivo, particular attention was paid to the form of community - organic cooperation. During the first phase on definition, the experimentation made it possible to identify the first three main actors of the ODL. These are teaching staff (TS=33%), students (S=27%) and administrative and technical staff (ATS=21%). Other entities such as partners, enterprises, educational institutions, financial institutions and insurance institutions account for 18% of the responses provided during the study. If this first step was carried out without mentioning the objective, the second one, which concerns transformation, took into account the individual objectives of all the actors. In the absence of teaching staff and administrative and technical staff, and especially when carrying out the student's personal work (SPW), breakdowns into groups of students were observed such as group 1(S), group 2 (S) to group n (S). This is the result of adopting Lewin's approach to the T. group. The last phase on the configuration made it possible to determine, taking into account Moreno Jacob's approach, the system of cooperation between the actors through the ODL platform (see diagram below).

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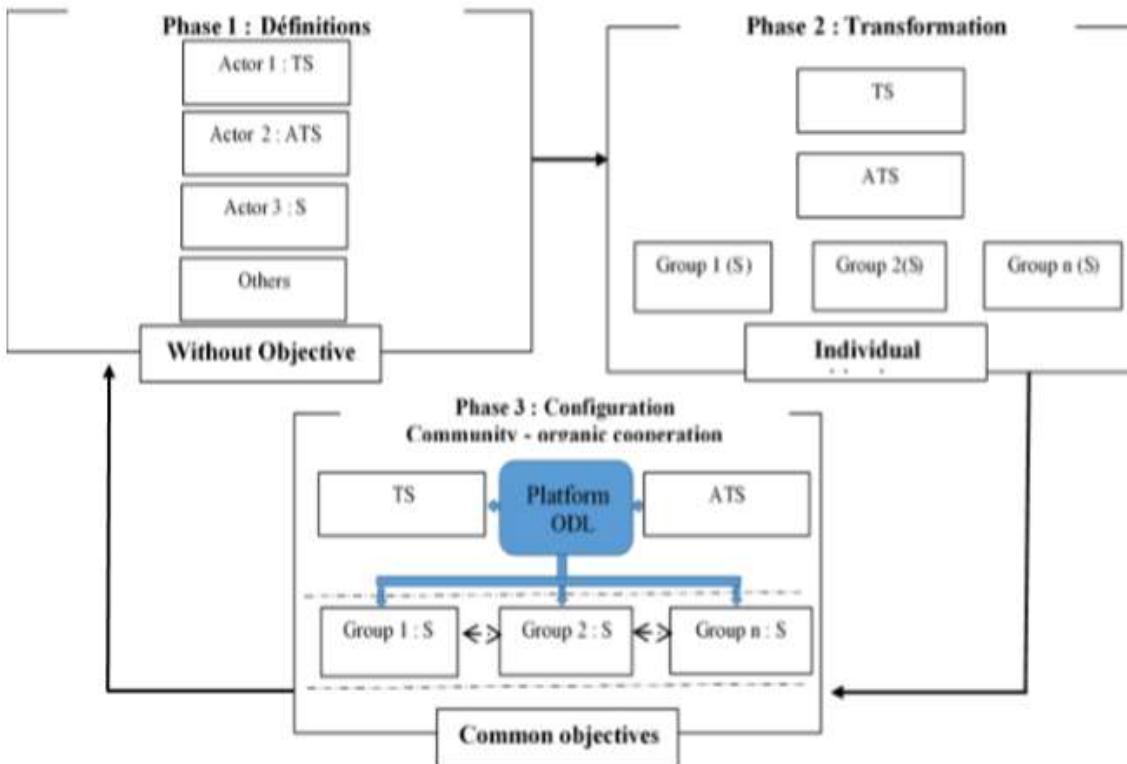
Figure 1: Cooperation process within the ODL
TS: Teaching Staff; ATS: Administrative and Technical Staff; S: Student

According to this scheme, the debate starts from the premise that no actor in the ODL works in a sustainable way in the direction of the general objectives of the ODL if he does not work at the same time in the service of his own objectives. If he fails to reconcile the interests of the ODL organization with his own, he will either betray the ODL organization by using it to achieve his personal goals at the expense of organizational goals, or he will sacrifice his own interests for a time and quickly feel betrayed. There may be conflicting visions on the theme of convergence of objectives or solidarity in the ODL organization. Another problem arises when these actors do not feel technically or pedagogically strong enough to be independent actors. As they need the protection of the ODL organization to develop individually, they prefer to join a collective work to better achieve their own objectives. They are willing to fully assume their responsibilities, make effective use of their entrepreneurial capacities to innovate and make every effort to achieve through their successes, in exchange for security in their career development. This vision can be described as a convergence of individual results and it is the basis for Community - organic cooperation. If each member of the ODL organization achieves the individual results to which it is committed, the organization as a whole considers this to be a satisfactory success.

Community - organic cooperation was observed in the groups on which students depend on the actions of other actors such as teaching, administrative and technical staff. The group membership model, on the other hand, assumes that the need to belong to the group is a very important aspect of social life (Maslow A., 1954). Actors want to be treated as prominent members of sustainable groups. They attach importance to procedural justice. Community - organic cooperation is, in fact, seen as a tool for building group solidarity and ensuring strong bonds between its members. This is why, to enter a community, Fiol Michel, Jordan Hugues, Sullà Emili (2004) assert that one must ask the actor for self-denial and humility, faith and obedience in order to divest oneself of individualism and accept to submit to the ethical rules of the community, to the values accepted by all.

To continue the debate, many researchers and authors in pedagogical sciences (Nicole Racette, Bruno Poellhuber and Marie-Pierre Bourdages-Sylvain, 2017) and especially in management sciences have long been talking about cooperation. The first reflection on cooperation, in the theories of organizations, was highlighted in the

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classical current. This school brings together thoughts from authors including Taylor F., among others. (1911) on the Scientific Labour Organization (or SLO), Fayol H. (1966) on the basic principles of management, Weber M. (1957) on authority relations within the company. The Scientific Labour Organization, as being at the center of managerial interest, generates a form of vertical cooperation. That is to say, cooperation should be exclusively vertical between superior and subordinates. In the ODL framework, the parties involved go beyond the two extremes of "superior - subordinates". According to Arnaud Galisson (2004), there are several actors, namely the content expert (or teacher), the educational engineer, the technologist and the learner. While the first two are teacher-researchers, the other two are the administrative and technical staff and the students as a whole. Thus, three complementary entities are to be considered such as the teaching staff (TS), upstream, the students (S) downstream and the administrative and technical staff (ATS), at the intermediate level (see the diagram below).
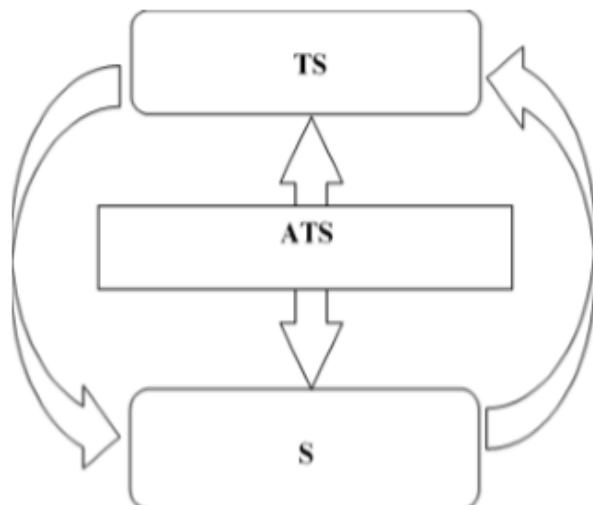

Figure 2: Vertical cooperation of ADF actors
PE: Teaching Staff; PAT: Administrative and Technical Staff; E: Student

Vertical coopération between these actors makes it possible to benefit from the complementarity of resources and skills, while reducing the risk of knowledge transfer (Hamouti, R., Robert, F. & Le Roy, F., 2014). This complementarity is justified by the interdependence of individual interests. That is, an actor thus cooperates with other actors who have interdependent objectives. From this point of view, it is therefore essential to integrate oneself into the training process. The decision to cooperate therefore depends on the rational calculation of the individual. It is based on the economic reasoning of cooperative exchange, where everyone seeks to maximize their benefits. However, cooperation in the face of complementarity unfolds a framework with constraints related to the hierarchy between the actors (TS, ATS and S).

Taylor's idea of vertical cooperation has been criticized by many authors. Several authors such as Elton Mayo, Maslow Abraham (1954), MC Gregor (1960) have questioned this concept. First of all, a study conducted by Elton Mayo within Western Electric reveals the inaccuracy of strictly Taylorian conceptions (Astouric, Alain, 2004). Moreover, Darbelet M. et al. (1998) confirms that he can demonstrate the importance of the homogeneity of a working group (own objective, solidarity) and participation (discussion, cooperation in work efficiency). Moreover, Monie Roger (1986) notes that it seems that the foundations of the Taylorian organization precluded any systematization of the appreciation of individuals. Next, a theory on employee motivation was studied by Maslow (1954). This theory states that there is a scale of needs felt by people at work. The hierarchy of these needs concerns physiological needs, safety needs, group membership needs, self-esteem needs and self-actualization needs. Maslow's (1954) study shows that the man's motivation to cooperate is not limited to Taylor's wage system, but rather to these different needs, especially the need to belong to a group. Finally, the "X and Y" theories developed by MC Gregor (1960) in his book "The human side of enterprise", shows that, compared to theory X, theory Y therefore favours the "cooperation" of employees in the firm.

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A common point in their criticisms of cooperation concerns the failure to consider the human aspect during the Taylorian period. The paradigm of purely vertical cooperation, between superior and subordinates, conceived by Taylor may be paradoxical according to authors from the school of human relations. This school gives particular importance to human resources in cooperation. For example, Daniel Soulé and Dominique Roux (1992) consider the members of organizations to be key factors in the foundation of cooperation.

The emphasis on the human aspect leads to transversal cooperation whose foundations are not visible in the classical current. Human relations appear as a determining factor in the performance of an organization. The existence of forms of transversal relations, which follow an informal path, is recognized within the organization. According to Capul Jean-Yves (1998), these transversalités correspond to various forms of organization which, by their common characteristics, pose a specific management problem: how to organize the work of different competencies in the absence of a common hierarchical authority? This is the origin of transversal cooperation (cf. Diagram below).
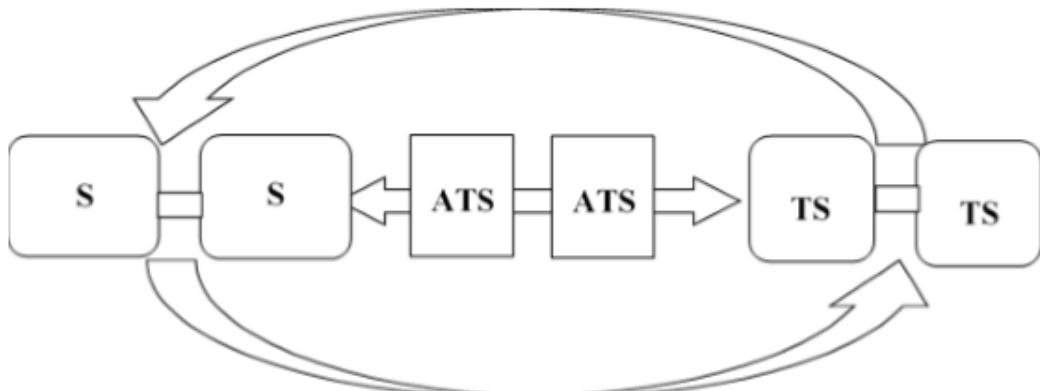

Figure 3: Cross-cutting cooperation between the actors of the ODL
TS: Teaching Staff; ATS: Administrative and Technical Staff; S: Student

The development of transversality between functions or, alternatively, between services immediately raises the question of cooperation. It is a question of getting a group of individuals working together who have no hierarchical link between them, who depend on different authorities and who often do not have the same hierarchical level.

Yet the development of cooperative practices is not innate. Within an organisation, cooperation takes on a special dimension. If in traditional economic theory, cooperation is opposed to competition, in the enterprise, it is rather opposed to the absence of relations and communications, to mutual ignorance and misunderstanding. The existence of cooperation as the main source of efficiency is thus reflected in the references increasingly marked by Japanese organizational models (Aoki M., 1991) in which the work collective dominates, making a contribution that exceeds the sum of individual contributions.

Consequently, the cross-cutting functions seek to bring together actors who are interdependent in the training process. Transversal cooperation is then justified, as it can improve the speed of information transmission and above all the flexibility of the ODL.

All in all, the Community - organic cooperation modality is seen as a combination of two forms of cooperation, i.e. vertical and transversal cooperation. It is within this framework that an attempt has been made to consider some approaches to cooperation and its evolution in the theories of organizations. These are cooperation in the classical current following the example of Taylor's approach and cooperation according to the school of human relations. From this perspective, the group is always considered as a place where cooperation is formed.

4. CONCLUSION

In conclusion, it must be admitted that there are other persons, both natural and legal, at national and even international level, who can be considered as actors in the field of ODL. However, this article deals with the system of cooperation only at the level of the three main actors in the ODL, namely the teaching staff, students and

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administrative and technical staff. The observation was focused on the experimentation between these stakeholders of the ODL within the University of Antananarivo. Indeed, the result obtained was based on the system of community-organic cooperation. From this perspective, social identification and solidarity, via the ODL platform, lead to the mutual recognition of actors such as students, teaching staff as well as administrative and technical staff. The use of the ODL platform, as a means of communication through forums, instant discussions and all forms of online interactions, promotes cooperation. The main reasons were justified by the spatial and temporal flexibility of ODL.

It has been found that cooperation means working collectively and jointly. Cooperation requires, at the level of the actors, actions of definition, transformation and configuration of reciprocal relations within the group. This leads to the knowledge of the essential point of cooperation in the world of distance learning. The social identification and collaboration of the students gathered in groups contribute to the realization of a common task. This interactive approach promotes creative autonomy, treats each student as an actor and develops individual and collective responsibility Drolet, I. & Jacob, A. (1997). As a result, the actors cooperate with each other to develop and ensure the functioning of the ODL. This is why cooperation stems from all the social interactions in which the individual is involved (LIPIANSKI E-M., 1998). This community - organic cooperation using the ODL platform is thus a means of ensuring the functioning of an open and/or distance learning organisation.

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CONFLICT OF INTEREST

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ARTICLE SCIENTIFIQUE N°4

THE KNOWLEDGE MANAGEMENT SYSTEM IN OPEN AND DISTANCE LEARNING

Résumé l'article n°4 :

LE SYSTEME DE KNOWLEDGE MANAGEMENT DANS LA FORMATION OUVERTE ET A DISTANCE

Le présent article a pour objet de montrer les processus de knowledge management dès en amont à l'université si la revue de la littérature s'oriente vers l'aval au niveau de l'entreprise. A l'issue de la recherche réalisée à l'Université d'Antananarivo qui dispense une formation ouverte et à distance en sciences de gestion (FOAD Gestion), le modèle de Nonaka sur le SECI (la Socialisation, l'Externalisation, la Combinaison et l'Intériorisation) adapté au processus de management de la qualité préconisé par les normes ISO 9001 version 2015 a permis d'établir un modèle de cartographie des processus de SECI de la FOAD. Le transfert direct des connaissances, par le biais de la socialisation, du savoir tacite au savoir tacite représente 10% contre 90% pour le transfert indirect des connaissances.

Mots clés:

Knowledge management, Formation à distance, Transfert de connaissances, Management de la qualité

Certificat de publication de l'article n°4:

Research Article

THE KNOWLEDGE MANAGEMENT SYSTEM IN OPEN AND DISTANCE LEARNING

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ABSTRACT

The purpose of this article is to show the knowledge management processes upstream at the university if the literature review is oriented downstream at the company level. At the end of the research carried out at the University of Antananarivo, which provides open and distance learning in management sciences (Management ODL), Nonaka's model on SOCI (Socialisation, Outsourcing, Combination and Internalization) adapted to the quality management process recommended by the ISO 9001 version 2015 standards made it possible to establish a model for mapping ODL's SOCI processes. The direct transfer of knowledge, through socialization, from tacit knowledge to tacit knowledge represents 10% against 90% for the indirect transfer of knowledge.

INTRODUCTION

At the heart of the third millennium, knowledge management, which is a rapidly expanding field (Ermine Jean Louis, 2014), is one of the major concerns of social science researchers. It is presented today as a major issue in the functioning of organizations and societies (Pesqueux-Yvon, 2011). By definition, it can be considered as "a set of concepts, methods and technologies that allow members of an organization to work together in the direction defined by the organization, to link available information, knowledge production and the development of individual and collective skills" (Knauf, 2010). However, Ababacar Mbengue (2004) finds knowledge management to be a proactive, often explicit and systematic approach to enhancing the value of the company's intangible resources. This approach integrates activities of creation, collection, organization, dissemination and exploitation of explicit and tacit knowledge useful to the company. In particular, this requires transforming individual knowledge into organizational knowledge and importing knowledge located outside the company in order to make appropriate use of it within the company. In other words, the source of knowledge in the individual is located upstream, while its exploitation in the organization and/or in the enterprise is located downstream. While several studies have focused on the latter point, this article focuses more on the former, which is none other than the

training of the individual. But why is it called open and distance learning (or ODL)?

The answer to this question requires clarification of two fundamental approaches conveyed in the terms ODL. These are "open training" on the one hand and "distance learning" on the other. For the first approach, Bendouba A. (1992) gave the fundamental characteristic of open training compared to traditional training. It is their greater accessibility, that is, the flexibility of their modes of pedagogical organization that specifies the open aspect of a given training. According to Bernard Blandin (1998), the purpose of open training is to understand training activities that are based, in whole or in part, on non-"face-to-face" learning, whether self-training or tutoring, at home, in the company or in a training center. The same author has given more details on this open learning system based on "any form of study whose flexible aspects make it more accessible" (Blandin Bernard, 1999). He emphasized for this definition that what characterizes "open" systems is their accessibility, a term that applies equally to learning content, the way it is structured (modularity), the places of learning, the times of learning, the modes of teaching and the media. Indeed, this notion of "flexible arrangements" justifies the raison d'être of open learning. For the second approach, distance learning was born with the postal organization in the mid-19th century, the use of images followed the birth of photography; radio, television, video and

digital media gave rise to new devices each time (Morin Philippe, 2003). It is based on any form of study that is not under the permanent control of a director of studies. In other words, Blandin Bernard (1999) reiterated that it is the learner's autonomy during a more or less important part of the training that characterizes this type of distance device.

Therefore, the combination of these two open and remote approaches makes it possible to retain the simple definition of ODL as a flexible training device in time and space. This concept of "flexibility" is related to the definition put forward by AFNOR on the training system designed to allow individuals to train without moving to a training location and without the physical presence of a trainer. Moreover, the DGEFP characterises open and/or distance learning as a flexible training organized system according to individual or collective needs (individuals, companies, territories). It involves individualized learning and access to local or distance resources and skills. It is not necessarily carried out under the permanent control of a trainer. However, how can knowledge transfer management be improved at the ODL level? The answer to this central question, around which this research is structured, will be divided into two distinct parts. The first will concern the theoretical and methodological framework. The results of the study and the discussions will be shown in the second part in order to draw a conclusion at the end on the ADF improvement system.

Theorical and Methodological Framework

The empirical study of ADF requires an analysis of the concepts of knowledge management. Two essential views, the epistemological on the one hand and the economic on the other, are an essential step before the actual presentation of the work methodology.

Epistemological and economic views of knowledge management

Within the epistemological framework, several research studies on knowledge have been carried out, such as those of Polanyli, M. (1966), Nonaka and Takeuchi, (1995); Ermine Jean-Louis, (2014). This knowledge has two facets. On the one hand, the rationalism approach (Platon) considers it as an a priori mental process resulting from deductive reasoning. On the other hand, the empirical approach (Aristote) sees it as the result of a posteriori experience, acquired from experience (Yvon Pesqueux, 2011). These two approaches make it possible to distinguish between multiple forms of knowledge. Thus, S. Duizabo & N. Guillaume (1996) distinguish three categories of organizational knowledge where we find the trilogy "to know – to make – to understand" by J.-Y. Prax (1997):

- ✓ Knowledge related, descriptive, static, directly usable, more like information,
- ✓ Knowledge of how to do things is dynamic, more a matter of methods and procedures,
- ✓ Knowledge related to understanding, resulting from enrichments brought by exchanges between people and rather from communication.

For their part, Ababacar Mbengue (2004) finds four models: strict knowledge (knowledge), know-how (skills), life skills (attitudes) and learning skills. According to Collins H. (1997), there are five types of knowledge. These are, first, Embrained

Knowledge which is formed by theories; second, Embodied Knowledge which is based on practices; third, Encultured Knowledge which is embedded in culture or social relations; fourth, Embedded Knowledge which resides in routines; and fifth, Encoded Knowledge which is oriented towards signs, symbols and codes of practices such as books, manuals and computer data.

However, the two categories of knowledge, which are cited much more frequently (Polanyi, (1966); Winter, (1987); Nonaka and Takeuchi, (1995); Reix, (1995); Faten Louati and Lubica Hikkerova, 2016) are none other than tacit and explicit knowledge.

Explicit or codified knowledge formalized knowledge that can be transmitted through formal language or clear codes and facts. Examples include books, procedures manuals, teaching systems and databases (Reix, 1995).

Tacit or implicit knowledge (embodied knowledge) finds its source in actions, usage and its application in a specific context. It can take very diverse forms such as expertise, skills, know-how, etc. It is difficult to measure. It takes the form of knowledge that is impossible (or very difficult) to translate into speech. This is why it is incommunicable by a language. The essential characteristic of tacit knowledge is that it is difficult to transmit, cannot be verbalized and cannot be articulated (Polanyi, 1966). In this case, Reix, (1995) described two forms of tacit knowledge:

Contextual knowledge: a set of implicit values and norms that are more or less widely shared (what we do and what we don't do).

Practical knowledge: this is the know-how acquired through experience. It is also called procedural knowledge corresponding to a process (how to do?) as opposed to declarative knowledge. It appears in the form of "routines".

In the absence of formalization through language, knowledge is no longer separable from its holder and its context of use; it can only be acquired through processes of imitation and experimentation. Consequently, it is generally accepted that tacit, implicit or informal knowledge is a source of competitive advantage (Faten Louati and Lubica Hikkerova, 2016) because it is acquired mainly through practice and experience, whereas explicit or formal knowledge is easily codifiables, archivable and transmissible, especially through documents or language.

If this was the epistemological aspect, it is necessary to evoke now the economic aspect of knowledge. From this point of view, the knowledge-based economy is based on a long trend of increasing resources devoted to the production and transmission of knowledge and on a major technological event (Dominique Foray, 2000). This knowledge is then conferred to productive work based on a particular good. Arrow K. (1962) attributes the characteristics of a particular good on the basis of three properties close to those of public goods:

- ✓ It is not controllable because a person who disseminates knowledge is dispossessed of it without being paid, while others can use it. But to be enriched (because otherwise it becomes impoverished), knowledge must be disseminated.

✓ She's unrivalled in terms of her "consumption". Consequently, in the universe of neo-classical microeconomic theory, the price of knowledge cannot be fixed since its marginal cost is zero.

✓ It is cumulative because the flow depends on the available stock.

However, productive work is, according to Adam Smith (1776), work that adds value to the object on which it is performed. Conversely, work that does not add value is unproductive work. The asset of knowledge then corresponds to service. How to define the concept of service? A service activity is an operation, aiming at a transformation of the state of a reality C, owned or used by a consumer (client or user) B, carried out by a service provider A, at the request of B, and often in relation to him, but not leading to the production of a good likely to circulate economically independently of the medium C (Gadrey J. 2003). The provision of a service can be analysed as the provision of a technical or intellectual capacity to a user or client to introduce a change in a situation or in a reality. Its scope and intensity are necessarily variable. The typologies of services and the path to intellectual service provision are market and non-market services Clark Colin (1960). For the author, market services: the counterpart is the payment of a market price, whereas non-market services: they are not accompanied by the payment of a market price. For example, services are financed on the basis of taxes, the counterpart of which is not a market price. Service activities have a number of classic characteristics. The best known include intangibility, uncertainty and non-stockplability. Others, less well known, refer to the relatively similar notions of servuction, co-production and service relationships. These different characteristics, especially the latter, become all the more accentuated as we move closer to the intellectual services associated with knowledge. This knowledge through the service offered by the "human person" is then transformed into liquid in the organization, for the organization and for the satisfaction of human needs.

Thus, the realization of a service requires knowledge actors. Jean-Pierre Bouchez (2004), a consultant in management and human resources development, has forged, in the knowledge economy, an illustrated approach for identifying and analysing knowledge workers. According to the author, knowledge actors occupy a predominant place in the organization. It is from the 1960s onwards (according to Bouchez, Jean Pierre, 2004) that the concept of activities and professions centred around knowledge began to emerge. It is probably to the economist Fritz Machlup (1993) that we owe the first investigations on knowledge work as early as the 1950s. He published his classic book, the Production and Distribution of Knowledge in the United States. The author demonstrated the importance of the growth of activities related to the production of knowledge in the USA (kowledge-producing activities). Since the 1990s, the term "knowledge workers" has gradually gained currency and popularity, mainly with other authors such as Druker (1993). He showed that "knowledge is the resource that matters. The traditional factors of production, land (i.e. natural resources), labour and capital have not disappeared but have taken a back seat. (...) whether it is considered desirable or not, these developments respond to an irreversible change: now knowledge applies to knowledge itself". An absolutely decisive factor of production, the real resource that controls everything is no longer capital, nor land, nor labour. It is knowledge. Above all, it confirms that the knowledge worker, in order to be productive, must be considered as capital and that its growth must be promoted, whereas economists and most managers consider manual workers as a cost that must be controlled and reduced.

The knowledge worker is thus considered the owner of his or her skills. Drucker (1999) indicates that an employee who performs manual work is not the owner of the means of production. He or she may, as is often the case, have valuable experience. He owns his means of production. The knowledge that lies between his ears is perfectly transportable and represents an enormous capital. The knowledge worker is indeed mobile. An extensive concept of knowledge workers has emerged. Knowledge workers are described as people with important knowledge. Robert Reich (1991) in turn analyzed manipulators. Knowledge workers include all problem solving, problem identification and strategic brokering activities. Rifkin Jeremy (2000) sees knowledge workers as a new vanguard. It is an elitist conception. Knowledge workers are manipulators of abstractions. They manage the new high-tech information economy. Knowledge and ideas feed the information society.

At the end of these two epistemological and economic views, the review of the literature on knowledge management shows that there are several forms of knowledge, on the one hand, and there are also several works by the actors of this knowledge on the other hand. For the latter, we should recall the points of view of a few authors such as Drucker Peter (1999), who proposes a rather extensive perspective that includes many professional activities. Jeremy founded the much more elitist conception, while Robert Reich (1991) assumes an articulation and combination of the skills that knowledge workers must mobilize. Jean-Pierre BOUCHEZ (2004) has shown that there is a need to focus on forms of activities such as data processing, dissemination of information and knowledge, and the sale of ideas and concepts.

In this case, how can research be conducted in the face of different types of knowledge, knowledge actors and their work in knowledge transfer? Faced with a multitude of concepts that have already been presented previously, it is necessary to clearly define the theoretical framework of this research on upstream knowledge management, more specifically at the ADF level. The answer to this question concerns the methodological framework, which is the subject of the next step.

Methodology

Within the framework of the ODL, the SOCI model of Nonaka (2000) was taken into account in order to analyse the improvement of the remote knowledge sharing system. This concept shows four conversion processes between tacit and explicit knowledge through Socialization, Outsourcing, Combination and Internalization. Each process can be considered as a set of correlated activities that transform input elements into output elements. This is the reason why the methodology adopted for the realization of the present research is based on the "process approach" recommended by the ISO standards version 2015.

In order to do this, basic information, i.e. data from the ADF, is the input to the process upstream, on the one hand, and the data for making decisions with regard to students, teacher-researchers and general administration form the downstream process, on the other hand. In order to ensure that the recipients of these outputs could benefit from the research results, the main focus of the process based on the empirical study of the ODL ensured the processing of the inputs. It should be noted that this experimental analysis was framed within the research on improving the knowledge management system at the university. This ADF, a project already operational since the 2015 academic year, at the University of Antananarivo, is in fact the empirical study area. In order to know its experiences, the data were derived from observation and survey in the form of a survey. This observation made it possible to collect internal data in order to know the real situation experienced in the organization. In addition, a survey of 110 people was carried out to find out their views on knowledge management in ADF. Questions focusing on knowledge transfer processes were asked to the interviewees.

It must be admitted that the sample was so limited to 110 individuals out of 910 students, i.e. about 12% of all students enrolled at all levels (Bachelor's and Master's) at ODL during the 2018/2019 academic year.

RESULTS AND DISCUSSIONS

The processing of all the data allowed some quantitative data such as transfer rates to come out. Analysis of the data obtained led to the establishment of a model for mapping ODL processes following the models of Nonaka (2000).

Knowledge management process at the ADF level

At the level of ODL, the knowledge management processes were studied taking into account both the process approach recommended by the reference frames of the ISO standards version 2015 and the observation of the experience of the FOAD Gestion of the University of Antananarivo.
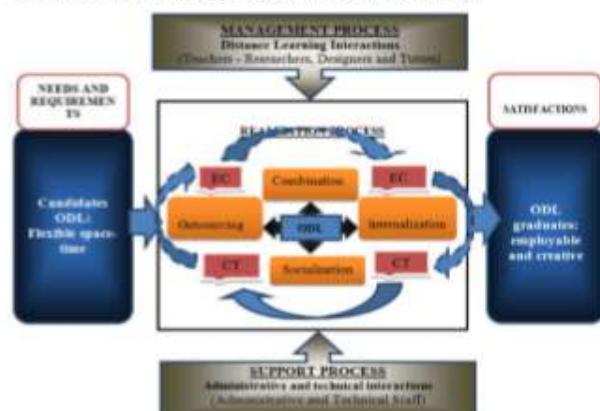
Figure No. 1 ODL SOCI Process Mapping Model

EK: Explicit Knowledge
TK: Tacit Knowledge

According to this diagram, the three (3) main processes such as the management process, the implementation process and the support process ensure the transformation of the needs and requirements of candidates within the ODL, as input elements, into the satisfaction of graduates, as output elements. The identification of needs and requirements in terms of flexibility of time and space of the system was validated by 65% of respondents while 70% expressed their satisfaction on condition that the training effectively leads to the employability and creativity of the graduates.

To do this, the management process was justified by the respondents. Seventy percent of them stated that it is the Teacher-Researchers who can ensure the steering and improvement of all the processes by carrying out the pedagogical interactions. These teacher-researchers can be both designers and tutors.

At the level of the support process, the answer on the question of administrative and technical interactions is clear, it is the PAT with 55% of answers, 21% prefer teachers and 24% for both entities.

As part of the implementation process, it was requested to show the workloads related to knowledge management according to the SECI system of Nonaka (1995; 2000). In this case, the following responses were provided:

- ✓ Socialisation, from tacit knowledge to tacit knowledge is evaluated at 10%: the direct relationship between the actors on group work and tutoring work (face-to-face and distance learning), experimentation in the field or in the company and the student's personal work (SPW);
- ✓ Outsourcing, from tacit knowledge to explicit knowledge is placed at 15%: the supervision of the learner both academically and professionally according to a methodology, the elaboration and presentation of reports or research papers;
- ✓ The combination of explicit knowledge is considered at 25%: the sending of courses by element, the supervision of theoretical research work, the review of literature, the methodology of academic work and the production of articles ;
- ✓ Internalization, from explicit knowledge to tacit knowledge is valued at 50%: the support of the learner, the internship, the capitalization of theoretical knowledge and application in the field.

Managing the transfer of knowledge on ODL

The review of the literature on knowledge transfer shows models [Polanyli (1966), Nonaka, (1995; 2000); Ermine Jean-Louis, (2008; 2014)] across levels of analysis within the firm (Prévot Frédéric, 2007) and intra-organizational relations (Berthon, 2001). The extension of the work of Nonaka (1995; 2000) seems to be fascinating on the modalities of upstream knowledge transfer at the ODL level. However, knowledge transfer processes can be carried out in two sub-elements: direct and indirect transfer. According to the information obtained from the ODL, direct knowledge transfer represents 10% of the work volume as opposed to 90% for indirect transfer.

Direct transfer of knowledge

According to Nonaka (2000), socialization is a system of direct transfer of tacit knowledge to tacit knowledge. To do this, the direct relationship between teacher and learner is a prerequisite. In spite of the distance in time and space between the actors of ODL, they can communicate with each other through the networks that enable them to learn tacit knowledge. These actors include Community of Practice (COP) and Community of Interest Network (COIN) such as Teaching staff and Administrative and Technical staff.

The tacit knowledge of teachers is difficult to transmit since this knowledge cannot be materialized through media such as books or other documents because it is innate. Hence, direct relations between the actors of knowledge are systematically imposed. As a result, the organisation of group work and tutoring (both face-to-face and distance learning) is more common in distance learning.

On the group work side, they represent 10% of the student's workload. These groupings or other forms of collective student work are often the result of pedagogical considerations. Given technological developments and pedagogical practices, they are not a requirement from the point of view of supervision, as long as there are other forms of monitoring, supervision and control of attendance. The assistance of students to the grouping is not, in fact, compulsory, but it seems to be indispensable in order to dispense some of the tacit knowledge. Mentoring is the transfer of tacit knowledge through the companionship of an individual or group of individuals. The term companionship is often used in everyday language. It even officially designates, in some organizations, mentoring arrangements (Lucile Vadcard, 2018). However, Anne-lise UlmAnn (2018) finds that the term mentoring covers many practices, none of which are clearly defined. It is often a question of training or accompanying a beginner. The author asks the question about the tutor's role in learning for these beginners if it is a matter of showing, explaining, learning to do, delegating and sharing the work. The answers to these questions vary depending on the situation. In reading several studies on tutoring, it was found that tutors are often volunteers to take on this responsibility of transmission. Some articles also note the formative dimension that tutoring activity takes on for them (see Thébault, 2014). This formative dimension may be the origin of the name "tutor trainer". He is at the heart of the training system but his participation in the learning process should not be limited to his mere presence on site. Other types of supervision exist, such as pedagogical and technical support in the context of a resource centre, and distance tutoring, whether synchronous or asynchronous. In this case, Martine Cauvin and Jacques Lacombe (1999) specify the need for a relationship between the teaching community and the individual learner based on the model of a return to personalized dialogue through the dual process of cooperation between teachers and cooperation between learners. The virtual approach, with tutoring, makes it possible to individualize one's own path and to appropriate knowledge and know-how at one's own pace (Martine Cauvin and Jacques Lacombe (1999).

Indirect transfer of knowledge

Indirect knowledge transfer at the ADF level accounts for 90% of the work volume. This process is characterized in three forms: outsourcing, internalization and combination.

Firstly, it is the outsourcing of tacit knowledge to explicit knowledge. The purpose of this action of explicitness is to transform tacit knowledge into knowledge in a palpable informational form. The transfer of knowledge is, in this case, carried out in an indirect way, since the teacher plays the role of intermediary while facilitating and supervising the student both academically and professionally according to a well-defined methodology during the elaboration and presentation of research reports or dissertations. Two methodological approaches have been proposed by Ermine Jean-Louis (2008). The first type of approach concerns the transcription of knowledge while the second is based on knowledge modelling or knowledge engineering. These two elements can be complementary because the simple transcription of tacit knowledge allows the construction of models adapted to the nature of the knowledge to be described in order to be able to then represent it in adequate formalisms. (Jean Charlet, 2002).

Second, it is the combination of explicit knowledge. In other words, explicit knowledge will be indirectly transformed into explicit knowledge. From this perspective, information and communication technologies (ICTs) are an unconditional and automatic vector of development, according to Karsenti Thierry and Collin Simon (2011). Moreover, Messaoudi Faouzia *et al* (2012) shows that the development of ICTs offers, for the benefit of education, better opportunities for the dissemination of knowledge. With the help of the ODL platform, the combination of explicit knowledge is done through the delivery of courses by component and framing of theoretical research. This action enables students in ODL to carry out literature review, academic work methodology (or AWM) and production of academic documents.

Thirdly, it is about the internalization of explicit knowledge to tacit knowledge. This system of internalization of knowledge consists in assimilating and appropriating theoretical knowledge in practice through the teacher. This process requires two classical disposifitfs: experimentation (personal or collective) and training, according to Ermine Jean-Louis (2008). The first dispositive focused on experimentation consists of a kind of impregnation of the student in a given organization or company. For this to happen, people must recreate, from the explicit knowledge they share, their own tacit knowledge that will serve them in a specific way in their work. Internalisation is one of the modes of knowledge transmission towards behavioural change and organisational innovation. It enables the student's work system to be changed during a period of internship in the company after reading internal devices such as procedure manuals.

The transfer of knowledge takes place in a direct way between the tacit knowledge essentially held by the human mind. On the contrary, the existence of explicit knowledge justifies the indirect transfer of knowledge through the means of the information system. The two fundamental activities are the activity of acquiring the knowledge produced, and the activity of cognition, relating to the transmission of this knowledge.

CONCLUSION

On reflection, the knowledge management system, not only at the company level but also at the training level, more particularly on ODL, is a long-term task, especially in terms of

knowledge transfer processes. Following the review of the literature, many authors focus more on the management of the factors of the knowledge process at the level of the company, i.e. downstream. The best articles of the Harvard Review on Knowledge Management in Practice (2003) manage to bring together the contributions of about fifteen authors. Their contributions focus on several aspects such as the strategies to be applied to organize, develop and transmit knowledge within the company, the forms of organization to be favored to facilitate knowledge sharing, collective learning and change. They also tried to avoid the traps of inertia or passive resistance and to answer the question on motivating and empowering communication that promotes learning. The same is true of the work of Polanyl, 1966 and Nonaka, 1995) which is oriented downstream on tacit and explicit knowledge transfers at the enterprise level. The contribution of this article focuses on the process of knowledge transfer from upstream. In other words, it may be a continuation of the work of Nonaka (2000). Following the research carried out at the University of Antananarivo, which provides open and distance learning in management sciences (ODL Management), Nonaka's (2000) model on SOCI can be adapted to the quality management process recommended by the ISO 9001 version 2015 standards. This system will make it possible to transform input elements (needs) into output elements (satisfactions). In the framework of the ODL, the direct transfer of knowledge, through socialization, from tacit knowledge to tacit knowledge, represents 10%. This is done through group work and tutoring, experimentation in the field or in the company and the Student's Personal Work (SPW). On the other hand, indirect knowledge transfer is evaluated at up to 90%, of which 15% for outsourcing, from tacit to explicit knowledge, 25% for combining explicit knowledge and 50% for internalization, from explicit to tacit knowledge. In all cases, indirect systems are based on research and field training.

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ARTICLE SCIENTIFIQUE N°5

THE MANAGEMENT OF RISKS RELATED TO THE OPEN AND DISTANCE LEARNING SYSTEM.

Résumé l'article n°5 :

LE MANAGEMENT DES RISQUES LIES AU DISPOSITIF DE FORMATION OUVERTE ET A DISTANCE

Le présent article a pour objet d'analyser et de proposer des actions de minimisation des risques inhérents à la formation ouverte et à distance ou FOAD. L'analyse des risques d'un projet par estimation de gravité et de probabilité a permis d'identifier et d'analyser les risques ainsi que de trouver les solutions y afférentes. Les résultats obtenus auprès d'un projet de FOAD déjà opérationnel dans l'université d'Antananarivo à Madagascar ont permis de découvrir le risque pédagogique, le risque numérique et le risque communicationnel comme principaux risques non acceptables dans le domaine de FOAD. Les actions du personnel enseignant, des étudiants et du personnel administratif et technique constituent des solutions permettant de ramener au seuil d'acceptation des risques.

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THE MANAGEMENT OF RISKS RELATED TO THE OPEN AND DISTANCE LEARNING SYSTEM

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ABSTRACT
The purpose of this article is to analyze and propose actions to minimize the risks inherent to open and distance learning or ODL. The analysis of the risks of a project by estimation of severity and probability has allowed to identify and analyze the risks as well as to find the related solutions. The results obtained from a ODL project already operational in the University of Antananarivo in Madagascar have made it possible to discover the pedagogical risk, the digital risk and the communication risk as the main unacceptable risks in the ODL field. The actions of the teaching staff, students and administrative and technical staff are solutions to bring the risks back to on threshold of risk acceptance.

KEYWORDS:
Risk management, pedagogical risk, digital risk, communicational risk, open and/or distance learning

INTRODUCTION

In the context of the crisis caused by the COVID 19 pandemic, which is affecting both developed and developing countries, it is undeniable that many initiatives are seeking solutions in face to the upheavals in the political, economic, socio-cultural, ecological and legal environment. To get out of this situation, educational research must be considered as one of the priorities of decision-makers if we consider the United Nations' 2030 goal of sustainable development to ensure inclusive and equitable quality education and to promote lifelong learning opportunities for all. Thus, "education is the most powerful weapon to change the world" according to Nelson Mandela.

Yet, today, higher education, especially in Southern countries such as Madagascar, where this research was conducted, faces paradoxical situations (Makosso, 2006) [1]. These include the degradation of infrastructure and the learning environment, the brain drain, the decline of research and the amplification of conflicts between students and higher education staff unions. In addition, for several years, the capacity of public universities has been unable to meet the demand for new baccalaureate graduates to continue their higher education. This social phenomenon has two consequences: higher education institutions have to manage a large mass of undergraduate students; they have to demonstrate a great capacity for supervision, in view of lesser the significant selection of students university entrance.

Open and distance learning (or ODL), as a system of training that is flexible in time and space, is well positioned to meet these needs. In this case, distance learning programs can broaden access to higher education. Baccalaureate graduates located in remote areas, who cannot afford to move to a university city, find it cheaper to enroll in a distance education program. Distance education is also an option for those who have not been admitted to a university, or for older students. Training is not affected by the strikes and political unrest that affect universities. Programs are generally more job-oriented; distance learning also develops learners' autonomy.

The ODL thus provides several advantages for the benefit of students, teaching staff, and technical and financial personnel. However, it must be noted that this training system is exposed to risks. Generally speaking, a risk can be defined as a danger, a more or less probable inconvenience to which one is exposed or a possibility of an event that may cause damage. Risk can be perceived as "objective" (the result of a rational, non-interpretative approach to risk) or "perceived" depending on the position of the social agent in his or her exposure to risk and

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taking into account his or her psychology [2]. For Garel and Giard [3], the risk at the project level is the possibility that a project will not be carried out in accordance with prediction of completion dates, costs and specifications; such deviations from prediction are considered difficult to accept, even unacceptable. The risk results from a contingency or uncertainty or an unforeseen event. The question then arises: What are the risk factors in ODL in a country like Madagascar? By the way, no study in this sense has yet been developed in sub-Saharan Africa. On the theoretical level, more investigations in other contexts are necessary to establish the validity of the research. Moreover, such an investigation will make it possible to give more pragmatic implications for the development of ODL in Madagascar.

This article is organized in three parts. We will first clarify the theoretical foundations and clarify the concepts of our research. Thereafter, we will detail the methodology used as well as the treatments carried out. The results will be presented and discussed towards the end.

RISK MANAGEMENT PROCESS

According to Ferchaud [4], the risk management process can be formalized in five essential steps: acceptability (defining the tolerated risks); identification (identifying uncertainties and assessing the associated risks); evaluation (assessing and prioritizing their impact); risk actions (defining and consolidating the resulting actions); management of residual risks (monitoring and controlling the application of these actions). At the project level, the risk management approach forms a continuous and iterative process throughout the project life cycle. In this case, the approach proposed by Courtot [5] can be divided into five steps. These are risk identification and analysis, risk assessment and prioritization, risk control, risk monitoring and control, and risk capitalization and documentation. Whereas risk management according to Blondel and Gaultier-Gaillard [6] comprises three classic steps. The first concerns the identification of risks. This makes it possible to draw up an exhaustive list of all the events likely to hinder the smooth running of the innovation. The second concerns the evaluation of the possible impact of the risks. According to the degree of seriousness of the consequences and the probability of occurrence of each hypothesis, the risks are prioritized. The last step focuses on the treatment of risks. This involves determining an action plan based on priorities, then developing a strategic watch designed in particular to verify the applicability and, finally, monitoring the recommended treatments.

On the basis of these different approaches, the reconfiguration of the risk management approach, within the framework of the present research at the ODL level, has made it possible to pose three postulates on the identification of risks, the probability of causes and the seriousness of the effects of risks. First of all, ODL encounters risks at the pedagogical [7]-[8], digital [9], communicational [10]-[11], informational [12]-[13]-[14], IT [15]-[16], technical [17], administrative/operational [18]-[19], financial [20]-[21], human [22]-[23] and quality [24]. Next, failure to learn, failure to master digitization, failure of online interactions, failure to secure data, failure to process information, software failure, inadequacy/failure of procedures, poor financial operation, lack of care and poor quality of service are the probable causes of the risks associated with the ODL platform. And finally, learner incompetence/abandonment, cyber risk, insufficient tutoring, loss/leakage of data, lack of traceability, interruption/non-access to the platform, embezzlement, financial loss, illness, and dissatisfaction constitute the severity of the effects of risks related to the ODL platform. Taking these ideas into account, the model of risk management in ODL is as follows:
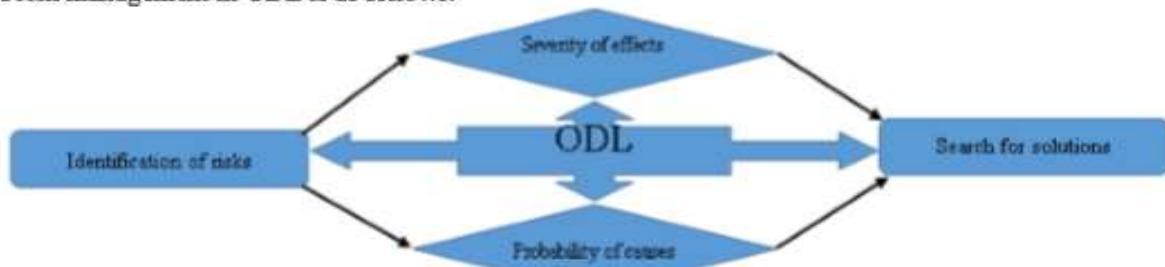
Fig.1: Risk management model in ODL

According to this model, the purpose of identifying these risks is to research, recognize, and describe the risks that may prevent the smooth running of the ODL. Risk is measured by multiplying two criteria: frequency (or probability) and severity (or impact). Frequency expresses the probability of the risk occurring. Severity measures the importance of the impacts envisaged if the risk occurs. The result of this multiplication is the

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criticality of the risk. The search for solutions to achieve risk acceptance, risk sharing with another party (such as contractual sharing) or and the transfer of risk management to a party (insurance). In other words, risk management [5] is the iterative process applied throughout a program that includes risk identification, estimation and control activities.

METHODOLOGY AND DATA

The data were collected from the ODL proposed by the University of Antananarivo. This organization is one of the pioneers of distance learning in public universities in Madagascar. In order to be able to draw overall conclusions from the results obtained, a survey using a more structured questionnaire to avoid errors due to open-ended questions was conducted in a significant sample. The questionnaire was first pre-tested with 10 individuals. The final version of the questionnaire was then sent to the 110 individuals legally enrolled in the training. It should be noted that this sample represents nearly 10% of the people pursuing this training system. During the field visit, their ideas on the risks in ODL were asked for, and then the causes and effects of these risks. The information obtained made it possible to draw up the tables showing the probabilities of cause and the severity of effects of the risks and to establish the risk diagram. These different steps are finalized by the establishment of the risk sheet.

It should be noted that the main objective of the survey is to predict certain phenomena studied by knowing the nature of the relationships between cause and effect. For the questionnaire, the Likert scale approach was used with different possible answers, for example, "Strongly agree", "Agree", "Disagree" and "Strongly disagree". The first question was whether they agreed with the following 10 risks of ODL. These are pedagogical (R1), digital (R2), communicational (R3), informational (R4), computer (R5), technical (R6), administrative/operational (R7), financial (R8), human (R9) and quality (R10) risks. For this question, the respondent can answer either "strongly agree", "agree", "disagree", or "strongly disagree". The second question concerns their ideas on the degrees of cause of risks on learning failure (C1), failure to control digitization (C2), failure of online interactions (C3), failure to secure data (C4), failure to process information (C5), software failure (C6), inadequacy/failure of procedures (C7), poor financial operation (C8), lack of care (C9), and poor quality of service (C10). In this case, the respondent was asked to choose one of four propositions for each cause of risk: either "Very Low", "Low", "High", or "Very High". Then, the degree of risk effects on learner incompetence/abandonment (E1), cyber-risk (E2), insufficient tutoring (E3), data loss/leakage (E4), lack of traceability (E5), interruption/non-access to the platform (E6), malpractice (E7), financial loss (E8), illness (E9), and dissatisfaction (E10) was asked. Among the four proposals, each respondent chooses an alternative for each effect. Il will be enough to simply mark the choice according to the respondent's perception.

The identification of risk reduction systems was subsequently the subject of the study. As a result, the risk detection system was observed at the respondent level. This system consists of determining and identifying the risk at a given time. It consists of the consultation of examination results (D1), observation of the digital text book (D2), observation of the platform (D3), observation of the specifications (D4), observation of systems and networks (D5), observation in the field (D6), analysis of the dashboard (D7), analysis of the financial statements (D8), consultation of the individual sheet (D9) and the satisfaction survey (D10). Finally, the respondents were implored to name one or two main actor(s) with their respective actions to reduce the risk in question most appropriately such as the teaching staff (TS), the administrative and technical staff (ATS) and the student (S). It was required to specify in case there are still other possible case(s).

The information obtained from the respondents was categorized. The data were processed after the last questionnaire completed by the respondents was received. The use of the "Spreadsheet" was sufficient to process the numbers of responses provided. The transcription of the responses was carried out by adding up the numbers in the response tables. For this purpose, it was easy to determine the different percentages for each type of response. In all response scales ("strongly agree", "agree", "disagree", "strongly disagree"), the highest percentage was considered to be a statement of a question submitted to the respondents.

To obtain the research results, the generic approach of analyzing a project's risks by estimating severity and probability was used [25]. This method consists first of transforming qualitative risks into weighted values, then allowing the acceptance or non-acceptance of each risk using a simple criterion and finally, in the event of an unacceptable risk, defining a preventive or emergency solution that reduces the risk to the acceptance threshold. Furthermore, risk assessment according to Pesqueux [24] is based on the application of techniques used to quantify effects and to better analyze causes using severity scales. The classification of severity and probability using four qualifiers: "Very Low, Low, High and Very High" provides the risk disposition. Each qualifier

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corresponds to a power-coded area of 2, i.e. 2^0, 2^1, 2^2, 2^3, i.e. 1, 2, 4, 8. The risk corresponds to the product P x S. The descending diagonals in the table represent areas of constant risk. Two types can be defined: low risk with PG max = 4 and medium risk with PS max = 8. The risk analysis approaches followed were to define whether the type was "Low Risk" or "Medium Risk", to list the significant risks by defining their causes and effects (only those for which the Severity or Probability of occurrence is estimated to be High or Very High), to estimate the probability of occurrence of the risks and the severity of their effects (Very Low, Low, High and Very High). If P x S is greater than 4 (low risk) or 8 (medium risk), solutions must be found to reduce the risk by prevention or relief. The purpose of the analysis of the risks is not to list a large number of potential risks, which will be demotivating, but to consider only the significant risks. By "significant risk", any risk whose effect can be considered as Serious or Very Serious or whose Probability seems High or Very High has been retained.

RESULTS AND DISCUSSIONS

Risk identification and analysis. The responses provided by respondents to the question "As a student, do you agree with the following risks in the context of ODL? " are shown in the following table.

Table 1: Students' perceptions of risks

Risks		(a)	(b)	(c)	(d)	TOTAL
R1	Pedagogical risk	18%	38%	24%	20%	100%
R2	Digital risk	12%	42%	28%	18%	100%
R3	Communication risk	25%	46%	18%	11%	100%
R4	Information Risk	12%	32%	40%	16%	100%
R5	IT Risk	10%	27%	40%	23%	100%
R6	Technical risk	5%	20%	52%	23%	100%
R7	Operational Risk	18%	23%	38%	21%	100%
R8	Financial Risk	17%	21%	24%	38%	100%
R9	Bodily risk	9%	10%	37%	44%	100%
R10	Quality risk	14%	10%	49%	27%	100%

(a) Strongly agree (b) Agree (c) Disagree (d) Strongly disagree

The individuals surveyed, according to the information acquired, gave their explicit answers - in agreement - in the order of 38% for the "Pedagogical Risk", 40% for the numerical risk and 46% for the "Communication Risk". These are the main risks in terms of ODL according to the respondents. On the other hand, the other risks are categorically rejected. "In pursuing the ODL, show the degree of the following risk causes? ». This is the question asked to students to determine their ideas about the likelihood of the causes of the risks, and their results are as follows.

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Table 2: Risk causes

Risks			Causes	(a)	(b)	(c)	(d)	TOTAL
R1	Pedagogical risk	C1	Learning failure	20%	22%	32%	26%	100%
R2	Digital risk	C2	Failure to control digitization	18%	26%	40%	16%	100%
R3	Communication risk	C3	Network failure	10%	29%	42%	19%	100%
R4	Information Risk	C4	Failure to secure data	16%	36%	25%	23%	100%
R5	IT Risk	C5	Failure of the processing information	13%	42%	26%	19%	100%
R6	Technical risk	C6	Software failure	12%	46%	22%	20%	100%
R7	Operational Risk	C7	Inadequacy/Failure of Procedures	16%	40%	24%	20%	100%
R8	Financial Risk	C8	Bad financial transaction	40%	19%	22%	19%	100%
R9	Bodily risk	C9	Lack of care	27%	44%	19%	10%	100%
R10	Quality risk	C10	Poor quality of service	36%	40%	10%	14%	100%

(a) Very Low (b) Low (c) High (d) Very High

The answers obtained show that the probabilities of the causes of risk No. 1 (32%), No. 2 (40%) and No. 3 (42%) are high while the others are low or very low. Subsequently, the opinions surveyed on the effects of risks on ODL are shown in the table below.

Table 3: Risk effects

Risks			Effects	(a)	(b)	(c)	(d)	Total
R1	Pedagogical risk	E1	Learner incompetence/abandonment	15%	29%	44%	12%	100%
R2	Digital risk	E2	Cyber-risk	20%	38%	25%	17%	100%
R3	Communication risk	E3	Insufficient tutoring	8%	26%	48%	18%	100%
R4	Information Risk	E4	Data loss/leakage	20%	37%	25%	18%	100%
R5	IT Risk	E5	Lack of traceability	23%	52%	17%	8%	100%
R6	Technical risk	E6	Interruption/non-access to the platform	19%	41%	26%	14%	100%
R7	Operational Risk	E7	Malpractice	19%	39%	25%	17%	100%
R8	Financial Risk	E8	Financial loss	42%	22%	20%	16%	100%
R9	Bodily risk	E9	Illness	43%	30%	13%	14%	100%
R10	Quality risk	E10	Dissatisfaction	27%	39%	24%	10%	100%

(a) Very Low (b) Low (c) High (d) Very High

Learner abandonment (effect of pedagogical risk) and insufficient tutoring (effect of communicational risk) are high consequences according to the respondents. On the other hand, the other risks are classified in the probabilities of the effects of low and even very fable risks. Considering the risk analysis approach, the highest percentages indicate the rankings of probability of cause and severity of risk effects at 1 for "Very low", 2 for "Low", 4 for "High" and 8 for "Very high".

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Table 4: Probability of Cause and Severity of Risk Effects

N°	Causes				Effects			
	Very low	Low	High	Very high	Very low	Low	High	Very high
R1			4				4	
R2			4			2		
R3			4				4	
R4		2				2		
R5		2				2		
R6		2				2		
R7		2				2		
R8	1				1			
R9		2			1			
R10		2				2		

At the end of this probability matrix, respondents' perceptions of ODL risks are shown in the diagram below.
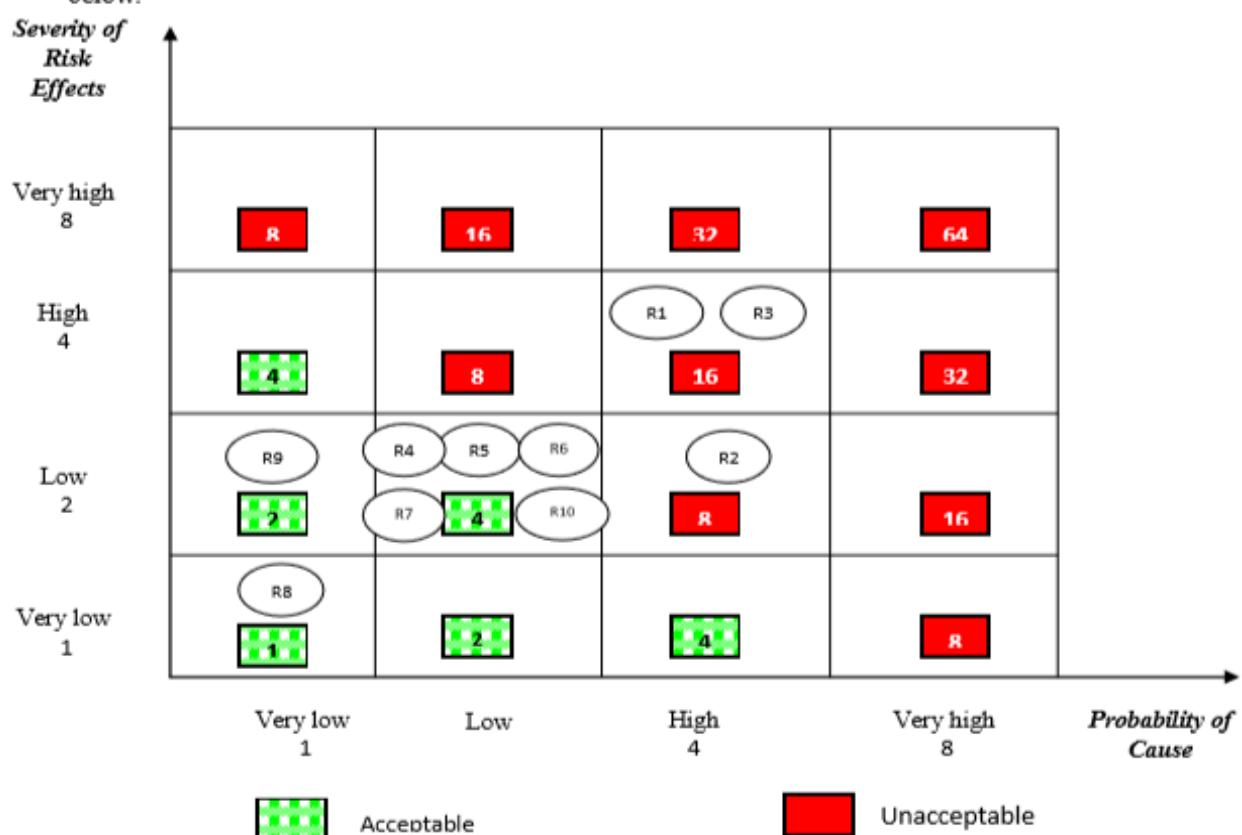
Fig 2: Diagram of ODL risks

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*Risk analysis.* The existence of risks linked to ODL is indeed a subject of debate on both theoretical and empirical levels. From on the results of research carried out at the ODL Management of the University of Antananarivo, points of view can be analyzed in order to offer food for thought regarding the acceptability or otherwise of the risks associated with ODL.

The diagram above shows seven risks considered acceptable in the framework of the ODL. These are financial risk (R8 $\Rightarrow$1), human risk (R9 $\Rightarrow$2) and other risks (R4, R5, R6, R7 and R10 $\Rightarrow$4). They are acceptable since their criticalities are assessed as 1, 2, and 4 respectively.

Firstly, the concept of informational risk (R4) is generally related to business intelligence and the legal field. To reduce the risk inherent in information, Delbecque [12] finds the importance of business intelligence. The latter, which is considered as know-how, is organized around the growth of the information society, the revolution constituted by the offensive management of the said information, and the challenge of knowledge production. Information risk management emphasizes an informational and communicational approach to risk by increasing the collection and feedback of information. However, it is important to note the extent to which an informational approach to risk is conditioned by an a priori representation. From a legal point of view, Du Manoir de Juaye [13] evokes in its article on "Le risque informanel au filtre du droit" that individuals can be victims of rumors and the absence of the right to be forgotten, but also of copyright infringement or exacerbated surveillance, while companies can see their stolen data and business secrets revealed. Thus, the level of informational risk is the product of the probability of attacks and the severity of losses [14].

Secondly, IT (R5), considered to be an essential element in ODL, is the first gateway to intrusions or errors that could jeopardize the training system. All the more so, not everyone is ever certain to be permanently protected from IT risks, even if there are daily innovations [16]. With this in mind, three types of risk have been put forward [15]: the first are based on the designation of an external, potentially dangerous area; the second are, on the contrary, internal risks linked to certain practices that need to be managed; and finally, the third refers to the physical vulnerabilities of IT tools. Research has shown that the most common computer risks relate mainly to viruses and malware (malicious programs), fraudulent emails, hacking, industrial espionage, embezzlement, loss of confidential information, operating errors and the risk of breakdown, fire or theft.

Thirdly, the idea of technical risk (R6), in the field of ODL, is based on the training systems and in particular on the training platform. Bertrand, I. [17] reports three elements related to this type of risk. These are, respectively, the structure hosting the systems, thus highlighting structural incompatibilities in the use of such systems, the incompatibility of FOAD systems with pedagogical and cultural standards, and the complexity of their implementation.

Fourthly, for operational risk (R7), the Basel Committee defines operational risk as the risk of losses due to the inadequacy or failure of procedures, staff, internal systems or external events" (BCBS, 2003). However, Bon-Michel [18] paid particular attention to the impact of identifying operational risk at the level of the learning system. According to Cherré, B. & Dufour, N. [19], one of the sensitive dimensions of the operational risk management function is intentional and concerns the bad faith that risk management functions may encounter. This bad faith is characterized by the refusal to adhere to an effective risk management approach by hiding the reality of risks in the organization.

Fifth, for financial risk (R8), it is part of the more general problem of economic risk based on the duality of profitability and risk [19]. In this case, profitability can be considered as the fair remuneration of risk. Furthermore, financial risk takes the form of credit risk or market risk associated with banking activities [20]. From this perspective, Aglietta, M. and Scialom [20] place financial risk at the level of electronic banking systems. The risk arises fraudulently through access to authentication data for customer accounts or the theft of monetary value storage cards. E-money in the narrow sense is itself exposed to the risk of criminal counterfeiting, and banks may be held liable for the amount of e-money forged.

Sixthly, the notion of human risk (R9) affects all actors at the level of FOAD such as learners, teaching staff and administrative and technical staff. It takes into account the health of these actors, particularly students. Improving young people's knowledge of the risks to their health is therefore a necessity. Research conducted by Migeot, V. et al [22] on the health behaviour of students in a university in France shows that the student population is characterised by a good state of health with, paradoxically, a high frequency of so-called "risk" behaviours. The risks and diseases that students feared most for themselves were traffic accidents, cancer, AIDS and sexually transmitted diseases. However, working students, who are probably far more numerous in ODL than those in the classroom, are exposed to the risk of excessive drowsiness. This risk is associated with other risks according to Carskadon, M. et al [23] such as the higher risk of educational difficulties and mood disorders. A study conducted in Brazil also confirms that students who work during the day and attend the

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institution at night are exposed to body pain, reduced sleep duration on weekdays and a higher number of work accidents [26].

And lastly, it is the quality risk (R10). According to Pesqueux [24], to manage quality is to manage risk and vice versa, i.e. Total Quality Management is the mirror of Total Risk Management. From this perspective, risk assessment is defined as a general process of analysis and evaluation. Therefore, the determination of risk on quality at the ODL level concerns the effect of uncertainty on a result expected by the actors, particularly the students. Considering the flexibility in time and space of the ODL, students demand high quality services corresponding to their needs.

Within the framework of the present research, three main risks are assumed to be unacceptable given the criticality evaluated at 8 and above. These are pedagogical risk ($1 \Rightarrow 16$), digital risk ($2 \Rightarrow 8$) and communication risk ($3 \Rightarrow 16$).

First of all, the literature on ODL generally shows considerable advantages of distance learning over traditional face-to-face training, including flexibility, accessibility, and variety of teaching and learning methods. However, several studies point to a worrying situation in view of the success rates in distance education or open and distance learning (ODL) courses, which vary from 20 to 45%, and the high dropout rate posted by universities. In addition, the reticence of many trainers and professors is still too present [7]. This constitutes a pedagogical risk, as there is a lack of knowledge not yet known, knowledge not yet acquired and learning not yet assimilated. Secondly, digital technology is an essential device in the context of the constant evolution of technology. However, this digital boom has been accompanied by the development of numerous risks in several facets. In this respect, Wolf [9] finds new forms of criminality ranging from the daily actions of cyber-vandalism or cyber-crime, where the lure of profit is the main driving force, to the hidden modes of action of cyber-warfare or economic espionage, which are much more difficult to characterize or recognize. From a legal standpoint, digital technology also facilitates criminal activities, so-called offences committed in the digital environment, and cyber-offenders use all means to achieve their ends, for example, by carrying out computer attacks of different types and modalities [27]. From an educational perspective, digital technology poses a risk of disrespect for others, for the privacy of teachers, education personnel or learners. Situations known as "cyberstalking" or cybercrime via web 2.0 tools are also problems that educators have to deal with. According to the United Nations, cybercrime covers any illegal behavior, involving electronic operators who aim to secure computer data systems. Young people's digital practices are all the more complex as they combine creativity, intimacy and self-exposure. At the level of the ODL in particular, Henda, M. B., [28] states in her study that the digitization of courses constitutes a risk leading to the demotivation of teachers. This is fundamentally crucial and complex for several considerations: economic, legislative and ethical.

Finally, the ODL system, which is done with a minimum of schedule or travel constraints, except for the constraints required for summative learning assessments, allows a student to learn alone or in a collaborative situation, with appropriate teaching materials and with the remote support of resource persons [29]. However, the physical distance work of stakeholders such as learners, teaching staff, and technical and administrative staff can face the risk of communication through both synchronous and asynchronous interactions. The results of the research carried out by Racette and al. [10] show that, in the majority of cases, the actors in the ODL do not obtain and do not provide the information necessary for the smooth running of the courses, thus forcing collaboration between them. In addition, Vilches and Pirard [11] find that the risk related to communication focuses on the lack of understanding of tutoring due to the unspoken and implicit in the tutor's words, which the learners find difficult to decode.

Risk reduction. Knowledge of these non-acceptable risks evokes a warning that takes into account the magnitude of their probability of cause and severity of effect. To manage the risks, respondents were asked whether they agreed with the risk detection systems. Their responses are summarized as follows:

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Table No. 5: Risk detection system according to companies

Risks			DETECTION	(a)	(b)	(c)	(d)	TOTAL
R1	Pedagogical risk	D1	Consultation of examination results	40%	30%	16%	14%	100%
R2	Digital risk	D2	Observation of the digital text book	22%	43%	24%	11%	100%
R3	Communication risk	D3	Observation of the platform	21%	41%	25%	13%	100%
R4	Information Risk	D4	Observation of the specifications	29%	42%	16%	13%	100%
R5	IT Risk	D5	Observation of systems and networks	40%	32%	20%	8%	100%
R6	Technical risk	D6	Observation in the field	30%	37%	12%	21%	100%
R7	Operational Risk	D7	Analysis of the dashboard	24%	45%	18%	13%	100%
R8	Financial Risk	D8	Analysis of the financial statements	26%	39%	20%	15%	100%
R9	Bodily risk	D9	Consultation of the individual sheet	30%	25%	40%	5%	100%
R10	Quality risk	D10	Satisfaction survey	42%	28%	20%	10%	100%

(a) Strongly agree (b) Agree (c) Disagree (d) Strongly disagree

According to the respondents, the proposed detection systems are practically accepted except for the one of consulting the individual sheet linked to the R9. However, the table below shows the sheet of unacceptable risks.

Table 6: Risk sheet

Elements		Causes	Effects
R1 : Pedagogical risk		Learning failure ⇓ Assimilation of learning	Learner Incompetence/abandonment ⇓ Motivation of the student and the teaching staff
Type	Preventive solution		
Détection	Consultation of examination results		
Actions	Actions of the student and teaching staff		
R1=PS	16 ⇒4		
Acceptability:	NO ⇒ YES	Probability P = 4⇒2	Severity S = 4⇒2
R2 : Digital risk		Failure to control digitization ⇓ Mobilization of the digital workspace	Cyber-risk ⇓ Technological survey
Type	Preventive solution		
Détection	Observation of the digital text book		
Actions	Actions of the student and teaching staff		
R2=PS	8 ⇒2		
Acceptability:	NO ⇒ YES	Probability P = 2⇒1	Severity S = 4⇒2
R3 : Communication risk		Network failure ⇓ Cooperation of actors	Insufficient tutoring ⇓ Strengthening of tutoring
Type	Preventive solution		
Détection	Observation of the platform		
Actions	Actions of the student and administrative and technical staff		
R3=PS	16 ⇒4		
Acceptability:	NO ⇒YES	Probability P = 4⇒2	Severity S = 4⇒2

The search for preventive solutions that reduce pedagogical, digital and communication risks requires the intervention of the three main actors in ODL. These are the teaching staff, the student and the technical and administrative staff. First of all, in order to minimize pedagogical risk, actions to assimilate learning and

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motivate the student and teaching staff at the ODL level are of vital importance. According to Henda Mokhtar Ben [28], the distance learning assimilation system requires four major qualities of each student: motivation, autonomy, discipline and self-management. On the one hand, students in ODL, in order to succeed, must have and personally develop these qualities as habits throughout their university courses. On the other hand, teachers must be motivated while considering economic, legal and ethical aspects.

Secondly, minimizing numerical risk requires actions of each learner as well as of the teaching staff. These actions are based on the mobilization of the digital workspace and technology watch. The digitization of educational content must be effectively operational through the digitization and online availability of work relating to ODL. Generally speaking, this requires not only qualified people to undertake the digitization of content, but also the legislative framework instituting the systematic restitution or deposit of online course content. Thus, the reduction of digital risk is linked to the security of data and strategic information or the reputation of the actors involved.

Finally, the reduction of communication risk takes into account the strengthening of tutoring work and the cooperation of actors, particularly students and technical and administrative staff. The communicational approach leads to refer to a rhetoric that tends to make risk management. In cases where the success of the ODL requires the collaboration and involvement of everyone, communication can be made effective by the behavior of certain actors beyond the retention of information while minimizing errors [20]. All the more so, even if knowledge is in motion and floating or in doubt, or even if it is being built, deconstructed and reconstructed according to Veyrié, N. [8], learners must be supported in the fact that the knowledge and learning evoked are not circumscribed, fixed and austere. In this case, the ODL system, which goes beyond the origin of the failure of the online interaction system, can lead to the improvement of the quality of ODL through the strengthening of tutoring work.

CONCLUSION

In conclusion, research on risk management in open and distance learning systems can contribute to the challenge of developing quality higher education for all. It is within this framework that this article stands up, given that this type of training is not exempt from risks. The risk management approach adopted has made it possible to analyze and propose ways of reducing the risks inherent in ODL. The three initial hypotheses on the identification of risks, the analysis of the probability of causes and the analysis of the severity of the effects of these risks were studied in a ODL project already operational in the University of Antananarivo in Madagascar. The analysis of risks by estimating severity and probability brought out the acceptability or not of each risk. The results obtained show three main risks supposedly not acceptable in the field of ODL such as the pedagogical risk, the numerical risk and the communication risk. From this point of view, the hypotheses are partially validated. However, it must be admitted that the evaluation of the acceptability of a risk cannot be left to science and expertise because of the collective aspect that is associated with the risk before it becomes acceptable. Acceptability is the result of a mental, social and cultural construction in which the emotional aspect comes into play [30]. For these unacceptable risks, preventive solutions that bring the risk back to the acceptance threshold depend on the real implementation of the actions of students, teaching staff and administrative and technical personnel, as the main actors in the ODL. The management of risks related to ODL is, therefore, an area for discussion on the improvement of the training system in both developed and developing countries.

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ARTICLE SCIENTIFIQUE N°6

STUDY OF THE ORIENTATIONS OF HIGHER EDUCATION PROJECTS IN MADAGASCAR

Résumé l'article n°6 :

REFLEXION SUR LES ORIENTATIONS DES PROJETS AU NIVEAU DE L'ENSEIGNEMENT SUPERIEUR A MADAGASCAR

Le présent article a pour objet d'exposer les orientations de projets des établissements d'enseignement supérieur   au niveau administratif, pédagogique et de l'environnement de l'enseignement en général. L'étude sur terrain à Madagascar, à travers une démarche d'observation, a permis de faire sortir des résultats à travers le test de conformité de chaque élément de la recherche. Les principales orientations stratégiques des projets ont été basées sur l'amélioration du système de gouvernance de l'institution, l'amélioration des programmes de formation à forte employabilité et le développement du système de partenariats avec le secteur professionnel.

Mots clés:

Projet, Gouvernance, Enseignement supérieur, Partenariat

Certificat de publication de l'article n°6:

Study of the orientations of higher education projects in Madagascar

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Abstract

The purpose of this article is to show the orientations of projects of higher education institutions in the administrative, pedagogical and educational environment in general. The field study in Madagascar, through an observation process, made it possible to bring out results through the compliance test of each element of the research. The main strategic orientations of the projects were based on improving the institution's governance system, improving training programs with high employability and developing the system of partnerships with the professional sector.

Keywords: *Project, Governance, Higher education, Partnership*

1. Introduction

Several researchers who have focused on project management try to show many possible and valid definitions of the project. According to Demeestère, René & al. (2107) [1], a project is considered as a combination of actions defined by the expected final result, a precise timetable, with a start date and an end date fixed a priori. The ISO 10006 version 2017 [2] standard defines the project as a single process, which consists of a set of coordinated and controlled activities, with start and end dates, undertaken with the aim of achieving a compliant objective to specific requirements such as time, cost and resource constraints. According to the Dictionary of project management, a project can be defined as a set of actions to be carried out to satisfy a determined objective, within the framework of a precise mission, and for the achievement of which not only a beginning, but also an end. This definition was formulated following the synthesis of about ten definitions, more or less consistent. Thus, the project concepts are notably based on a set of programmed activities, in time and in space, using precise and appropriate means to meet the given need in order to achieve a well-defined objective. In general, these different variables show the characteristics of a project in various independent phases (Néré, Jean-Jacques, 2012) [3]. All of the project phases form, in effect, the project cycle. These are planning, execution and monitoring-evaluation (WINTER M. (1996) [4]. In the literature, if many authors consider the managerial dimension as an essential element of the project, little attention is granted to research on project orientations in a given field. Hence the problematic of this research: What are the primary orientations of projects within the framework of higher education? In this case, the objectives are, initially time, to produce higher education graduates who are competitive, creative and employable in the national, even international economy; and secondly to produce research results that best meet the needs of national development, adopting innovative relationship mechanisms between research and the productive sectors.

2. Literature review

Research on the orientations of projects on the improvement of higher education and scientific research consists of supporting any activity of general interest relating to public services in education, and of effectively and sustainably promoting education. In the education system, this deserves special attention, especially in the administrative, pedagogical and educational situation.

2.1 Administration

The administration at the level of the higher education institution takes into account the new public management (NPM) [5]. The NPM aims to turn traditional administrations into performance-oriented organizations following basic principles. For Varone, Frédéric, and Steve Jacob (2004) [6], these principles consist, first of all in separating strategic decision-making, which is the responsibility of political power, from operational management, which is under the responsibility of the administration. . Then, it is necessary to orient the administrative activities according to the products to be supplied. Then we have to reduce the hierarchy, limit bureaucracies, decentralize certain administrative tasks and delegate management to the lowest level. In addition, market-type mechanisms must be introduced in the production of goods and services of general interest. In addition, transparency must be created on the quality and costs of administrative services. Finally, it is necessary to use public resources efficiently and to orient administrative services towards the needs of users. Faced with these principles, some authors try to study the change of administrative systems [7]. In this case, Peters B.-G., found four distinct models that transform existing administrative systems: the market model, the participatory state, flexible government and regulatory government [8]. According to Thompson J. [9], there are three types of consequences of administrative change: first, weight loss, reduction of costs and reform of administrative systems; second, decentralization for the benefit of agencies, strengthening of field skills and cultural change; thirdly, improving the quality of services and the efficiency of working methods. However, four levels of administrative change have been found by Pollitt C. & Bouckaert G. [10]: operational results (data, activities, results, and efficiency), processes (cost and customer orientation), cultural and structural effects, and the implications at the system level. These different possibilities for change following the adoption of new public management constitute a basic element in the search for project axes in academic circles.

2.2 Educational aspect.

It is very likely that many authors have been interested in research on pedagogy from early childhood to university pedagogy. For the latter, it deserves special attention in the face of research into the professionalization of the teaching profession in the current context of higher education. University pedagogy is, in fact, an emerging discipline in which teachers and students play a central role [11]. In this case, teachers take on the role of coaching, coaching and mentoring with new teaching practices using information and communication technology. New ways of teaching based on digital university pedagogy are being invented to meet the challenges of flexible places and times to learn. Loisy, C. & Lameul, G. (2014) [12] find that digital technology offers possibilities such as the enrichment of educational resources, networking, the diversification of learning methods and above all the development of open training and distance. First, educational resources in the digital age present challenges for higher education [13]. The Online University is the clearer case evoked to take advantage of the organization, structuring and dissemination of these digital educational resources [14]. Secondly, working in networks via the Internet is experiencing an exponential development in recent times. There are several forms of synchronous (instant messaging, public and private newsgroups) and asynchronous (e-mail, forums, discussion lists) communication. Third, the learning methods are so diverse. But the literature distinguishes them, in general, from formal learning in school or university and informal learning in society [15].Lately, it has been the development of open and distance learning. The research carried out by Blandin Bernard (1999) [16] presents four ODL models depending on the presence or absence of the trainer and the network. The first model is based on traditional distance training devices or e-learng in the case where the trainer and the network are absent. The second is the learning resource center in the event that the trainer is present but in the absence of the network. The third one, which is in the presence of both the trainer and the network presence, is characterized by two kinds of devices: "tele-training" devices, where the presence of the remote trainer is of the synchronous type via videoconference or audio conferencing, and virtual campus and virtual university type devices, where the presence is often asynchronous (messaging and forums, sometimes coupled with real-time meetings). The last model is called online learning, web-based training and web-based instruction because the trainer is absent while the network is present.

2.3 Technological situation of higher education.

The literature shows that the field of higher education is undergoing considerable changes in recent times following the relentless development of information and communication technologies for education (ICT) [17]. Castillo-Merino et al. (2009) find that these changes concern both the educational sphere, administrative tasks and organizational management methods within university institutions. The work shows the significant and positive effects of teaching methodologies associated with the learning environment through ICT (e-learning) on student performance [18]. The impressive

development of ICT has contributed to the proliferation of distance education devices and the lifelong learning system. In this case, educational institutions face five parameters, according to Lee, Hyun-Chong (2005) [19] such as vulnerability in the organization of university education, vulnerability in the structure of funding, enrollment in higher education, changes in the image of higher education and insufficient concern for efficiency in the management of education.

In other words, the changing environment for higher education and the new paradigms are focused on two dimensions: educational and structural. For the latter, the author has put forward five steps to follow. These are (a) the focus on teaching and learning services, (b) the orientation of educational programs towards the needs of the community, (c) the expansion of the role played by teachers in the service of society, (d) the greater orientation of teaching and learning towards consumers and (e) the generalization of project-based education programs. Thus, the deployment of ICT in education associated with the realization of these different approaches requires work in partnership with stakeholders [20]. For Tremblay, Gaëtan (2003) [21], partnership has become one of the fundamental characteristics of most training projects which involve the use of ICT such as professional learning projects, the implementation of ICT in training for University, the creation of information technology education and distance education.

At the end of the literature review, three hypotheses were formulated in the context of this research.

H1: The improvement of the governance system constitutes an orientation of the projects of the institutions on the administrative and technical level.

H2: The improvement of training programs with high employability results from a project orientation in the educational field.

H3: The development of the system of partnerships with the professional sector is part of a project orientation at the level of the environment of higher education institutions.

3. Methodology

As part of the improvement of Higher Education, it is necessary to know the different avenues of projects. Thus, information from higher education institutions was collected from a field study. Following the exploratory study on the strategy of scientific research as well as on innovation in higher education, an interview guide was developed in order to know the framing of the projects. During the field study in Madagascar, more precisely in the capital (Antananarivo) and on the southern axis of the Big Island (Antsirabe, Ambositra, Fianarantsoa and Tuléar), the heads of establishments, the administrative and technical staff as well as the teaching staff were approached as targets. Visits, which were also made to the presidency of the University or to the general management of the institution studied, made it possible to investigate 60 individuals, all officials combined. The observation approach adopted made it possible to bring out results through the conformity test of each element of the research.

However, difficulties were encountered throughout the descent on the ground such as the unavailability, reluctance and refusal of some officials. To overcome this obstacle, the questionnaire was submitted in two versions (paper and electronic) followed by reminders at the appropriate time until the questionnaire was duly completed. The qualitative information obtained would make it possible, during the first stage, to identify the main strategic orientations of each establishment in order to determine their projects. For each project orientation, two or three project frameworks have been proposed for justified validation. Beyond these frameworks, project orientations were also given. The next step is to determine the reasons for considering such a project. The variables to be studied in this analysis include the types of project and the reasons for choosing the direction of the project.

4. Result and discussion

This research has made it possible to identify and rank in order of importance, three strategic orientations at the level of higher education in Madagascar. These are (1) improvement of the institution's governance system (Orientation O1), (2) improvement of training programs with high employability (Orientation O2) and (3) development of the partnerships with the professional sector (Orientation O3). First, the project scoping for O1 is as follows:

Table 1. Compliance test on the O1

Projects	Yes	No
Higher education institution governance system modernization project (P11)	X	
Project to set up a quality management system for higher education in the institution (P12)	X	
Doctoral school improvement project (P13)	X	
Other project orientations (P14)	X	

The main reasons for (P11) are:
- The LMD system: The effective LMD system recommended by the supervisory ministry from 2014 necessarily requires a modern governance system. The switch to the LMD system and globalization require appropriate and renovated administrative, financial and governance measures. E-governance and continuous staff training are more than necessary. It is necessary to establish a balance and consistency between the administrative and educational structures and the ancillary systems (information, communication, logistics, etc.) as well as the human relations that meet the expectations of the students and the partner establishments.
- Globalization and the current environment: Modernizing the system of governance is so important because globalization is aggressive and the current environment is constantly changing. Thus, institutions wish to improve the internal governance system and more efficient NICT equipment allowing them to keep up with the speed of the evolution of globalization. This will allow them to improve education and work better with the line ministry, local universities and major universities abroad. An institution wants to improve its own system because it is interested in the modes of governance of a higher education institution for comparison.

Several arguments cover the P12:

- compliance with quality standards: Taking into account its reasons for being, its development and its viability, a training establishment must meet the demands of the job market as well as legal and regulatory requirements, and in particular the reforms initiated by the supervisory ministry. The establishment of a quality management system is at the heart of such conditions. The periodic renewal and adaptation of the course syllabuses of all teachers to the real needs of the labor market is a necessity (obligation) to improve the quality of teaching. This must be accompanied by the improvement of the materials available to teachers.
- Partnership system: In order to better achieve the improvement of the quality of education, the institutions wish to set up partnerships with local universities and large foreign universities. This will allow teachers to share and strengthen their skills with teachers from local and foreign universities. The partnership will also allow students to mobilize on a global scale.

Quality service: Not having a specific quality management service within the institution, the establishments are interested in setting up a quality assurance system. To do this, several elements were mentioned such as mastery of the texts and laws in force relating to higher education, the training of teachers, managers and administrative and technical staff as well as the establishment of good infrastructure (buildings, rooms classroom, computer park, library, laboratory and conference room;

- Education / employment match: the world of work is changing both nationally and internationally. There needs to be an evolutionary education in quality as well as in quantity. Since quality is the set of properties and characteristics of a given service which gives it the ability to meet expressed or implied needs. The Institution acts as a co-producer of its service to the students who are the recipients of its offer. Indeed, training remains the result of a co-production of the provider, the user and the employer. The concept of training is considered as the act of the one who learns, trains or as the act of the one who provides favorable situations for learning. The graduates of each promotion must be recruited after their training.

Preparing for the next generation, improving the quality and number of doctoral graduates and adapting to the LMD system are essential points alleged under P13:

- Preparation of the next generation: The number of teachers is still insufficient in relation to the enrollment requests. The training of trainers, the reinforcement of researchers and the preparation of the next generation in institutions require the establishment of an adequate Doctoral School for Teachers and Researchers given, not only their specificity (both scientific and educational as cultural), but also their place and importance in the LMD System to effectively contribute to the socio-economic development of Madagascar. Indeed, the swarming of short-term vocational higher education, necessary for a spectacular and rapid development of the national economy, requires accompanying measures, such as the training of decent trainers, researchers and succession, as well as openness to the professional world and to local and international scientific, technical and / or financial partners.

- Improvement of the quality and the number of people graduating in Doctorate: It is necessary to help trainers to continue their studies until obtaining the doctoral degree (granting of scholarships to carry out research, granting of computer equipment and works, etc.). The doctoral school will allow students to continue directly to the Doctorate because Madagascar recognizes a significant shortage of people with Doctorate degrees.

- Adaptation to the LMD system: The authorized doctoral schools must operate in accordance with the current context and the texts in force.

For P14, some orientations of the projects were observed. It is especially about:

Project to strengthen the monitoring and evaluation of the work carried out by teaching staff, administrative and technical staff and establishment of an internal control system for the financial management of the University and institutions. The breach of obligations by some permanent and temporary teachers as well as the quality outside of the courses provided builds the image of the University apart from a variant tendency to be focused by some managers.

Project to set up ICT, computer network and database creation tools (conservation of student statistical data for several years: lists of students, results, lists of graduates, etc.). All teachers each need a computer and a good quality (broadband) internet connection. Almost all teaching materials (boards, chairs, benches, electricity, etc.) will have to be replaced. It is necessary for all classrooms to have at least for this year video projectors, sound system and digital board (failing that a white board); the establishment must be inundated with high-speed internet connection. These ITC tools are compulsory for the LMD system.

Draft regulatory texts: The realization and success of these projects require decent frameworks and favorable conditions, such as the Fine-tuning and Renovation of the Regulatory Texts.

Project to improve the provision of the establishment: The scientific value of training and research forms the basis of the training provided. The post-training assessment carried out on the student's ability should meet the needs of the employer. How were they expressed or how did the students appreciate them? It is in terms of skills, qualification of tasks to be performed, jobs to be filled and performance to be expected. Other parameters considered are: behavior, personal potential or dynamism, adherence to a value system. In other words, the quality of the training institute's service is assessed by the satisfaction of the employer, firstly through the need for skills and secondly by the acquired skills used.

Second, the scoping of projects for O2 is as follows:

Table 2. Compliance test on the O2

Projects	Yes	No
Project to set up study programs delivering a double or multiple degree, or a common degree (P21)	X	
Project to modernize and restructure existing programs and education system to respond to the competitiveness, creativity and employability of graduates in the national and even international economy (P21)	X	

Two main reasons justify the P21, they are:

- Student and teacher mobility and readability from the outside world and from work: Joint graduation and openness to other institutions are fundamental principles of the LMD system. Indeed, on the one hand, they will allow the mobility of both students and teachers, and on the other hand the universalization of training. Diplomas remain the primary means of professional qualification. The more two or more a person has, the more likely they are to be better off at their job. This is still the reality both nationally and internationally and even in ministerial posts.

- Support for the issuance of a joint degree between Madagascar (an underdeveloped country) and a developed country: One institution has shown that it has already started this project of issuing a double degree with foreign universities. But due to a different economic level, foreign universities in developed countries have noticed that they are not taking advantage as there are hardly any students who want to study or graduate from an underdeveloped country like Madagascar. But we all know that the double degree is as important for the future of new graduates as they expand internationally. Thus, in order to achieve this, he would like the support of public authorities and international organizations in order to promote the establishment of double degrees between universities in an underdeveloped country and a developed country.

The views that ratify P22 focus on:

- Business partnership assistance: In order to achieve this project, the establishment wishes to set up a permanent partnership with local businesses. Thus, he can easily collect their human resources need. In this sense also, it will encourage speakers from these companies to carry out at least the conference relating to a subject because this will partially allow the adaptation of the academic world with the professional world. Thus, this reduces the duration of unemployment between leaving school and hiring in the workplace. Carrying out this project requires the help of the public authority to hold workshops with local businesses. The workshops will focus on improving the content of academic programs and defining the specializations demanded by the job market.

- Work-study training in the company: Work-study training in the company or in contact with the various formal and informal jobs will promote the culture of entrepreneurship as well as the culture for employment causing a change in behavior through acquisition by learners of a spirit of creativity and competitiveness. One establishment confirmed that graduates of Malagasy universities are renowned for their very advanced theoretical knowledge, but their efficiency at work still leaves something to be desired (the establishment of a dual training system with private sector involvement is highly sought after).

Table 3. Compliance test on the O3

Projects	Yes	No
Project in partnership with financial organizations and organizations supporting business creation and startups (P31)	X	
Training project in partnership with companies and private or public establishments (P32)	X	

- Adaptation according to the situation: The education system must evolve according to the realities of the professional market. The training modules offered must be updated in order to meet the real needs of the professionals who will welcome the outgoing students. Additionally, one institution found that the national and international economy is always evolving and iterative. After a few promotions, the modernization and restructuring of the existing curricula and education system is necessary to respond to the competitiveness, creativity and employability of school leavers.

In the context of improving training programs with high employability, two orientations are still proposed. First, these are projects for the modernization, renovation and strengthening of educational. Second, these are projects to set up a permanent exchange platform between economic operators (private sector) and university teaching and administrative officials. Its purpose is to identify in advance the needs of the private sector and their possible contributions to the permanent improvement of higher education.

Third, the scoping of projects for O3 is as follows:
The P31 partnership system is argued on the following bases:
- Funding of projects for outgoing students: Entrepreneurship is currently the watchword to get out of white-collar unemployment. Blocking the financing of business creation is a major obstacle for young people wishing to set up their own business. An establishment in the field of social sciences has already had the "start-up" project, but following its first experience, it is in dire need of technical and financial support. With this first edition, there had been the participation of more than 300 internal students. Thus, he strongly desires one or more funders to finance this project as well as the projects of their future business creators. The project to finance business creation projects is very important because job creation in Madagascar is very insufficient. So the only recourse to help new graduates is to help them start their own businesses.
 - Negotiations and commitments: These are the two fundamental concepts which condition the partnership system established by the establishment. The partners will not have the same objectives: some will rather focus on finances, for some it is learning, and for others it is post-training professional performance, still others are interested in logistics or other accessories etc. Thus, for the establishment, the various issues will be adjusted to each other before, during and after training, with the understanding that their clarification may possibly result from the actions taken. Indeed, actors of the same category could also have different issues. The initial knowledge and wishes of the various partners will have a considerable bearing on the negotiation of the objectives and the negotiating modalities should be explored together.
- Professional integration: Graduates of the establishment can be either employees or entrepreneurs, or both at the same time (Managing shareholders). The importance of this project is well established. Indeed, maximizing the creation of viable businesses allows both economic development and job creation. However, new graduates are generally insufficiently funded, but also new entrepreneurs requiring post-training support for professional integration.
The partnership system (P32) is approved according to the following ideas:

- Matching training / employment and mobility: the purpose of the project is to ensure a better match between training / employment (partnership with companies) and better mobility of students between higher education establishments offering the same types of training (partnership with a public or private institution). One institution has already had a partnership with two companies in order to carry out qualifying training courses for professionals. But due to some problems of attribution of obligation, this project is not very well known by the target people. Thus, he expects support from any entity to further strengthen this project because it is really important for retraining the staff of local businesses. This is essential to ensure the immediate employability of new graduates in order to meet the concerns of companies' short-term profitability.
- Pooling: The partnership with companies will provide a triple mutual advantage: professionalization of training, technology transfer and preselection of future job applicants or collaborators (trainee students). In addition, it will generate topics for continuing education, internships and end of studies dissertations for students and / or federative research topics with teachers. The partnership with private or public establishments is a means of promoting the pooling of resources and / or the mobility of students and teachers.
- Contract: Several contracts according to the different contractors are envisaged. This is a pedagogical contract (between trainer and trainee), financial contract (having interference with pedagogy and didactics), logistics contract (material conditions), engagement or placement (with national or international organizations), contract of " memberships (registration for an internship), negotiated contract (commitment made by each of the categories of actors) and moral contract (supplement).

Other orientations of the projects were also mentioned, such as the establishment of a structure to constantly monitor the main weaknesses of higher education institutions. Weaknesses can be addressed by partners with business (the private sector). This project makes it possible to better coordinate the intervention of the private sector in higher education.

5. Conclusion

To conclude, this research brings a new idea to the reform of projects in the governance, academic and technological fields of higher education. To strengthen the competitiveness of university institutions in carrying out their projects, it is suggested to take into account the prevailing trends of globalization, the development of information technologies, specialization and diversification. [22]. In addition, the partnership system must also be put in place. For Brulotte Raymod (2003) [23], the dynamism and viability of an interuniversity partnership rest primarily on the personal involvement of a sufficient number of professors in each of the associated establishments. Institutions that plan to make significant use of partnership for the development of their programming must explicitly recognize the administrative workload that a partnership program places on its faculty-promoters. They must also provide opportunities for adapting their policies, procedures and management methods to the specific needs of the partnership project.

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ARTICLE SCIENTIFIQUE N°7

THE MANAGEMENT AND THE ACCOUNTING AND FINANCIAL ORGANIZATION SYSTEM OF LASALLIAN SCHOOLS IN MADAGASCAR

Résumé l'article n°7 :

LE MANAGEMENT ET L'ORGANISATION COMPTABLE ET FINANCIERE DES ETABLISSEMENTS SCOLAIRES LASALLIENS A MADAGASCAR

Le présent article a pour objet de contribuer à l'amélioration du système de management de l'établissement scolaire. La recherche a été menée auprès des écoles lasalliennes à Madagascar à travers des investigations pendant deux sessions en 2019 et en 2020. Des suggestions basées sur les améliorations au niveau de l'organisation comptable et financière accompagnée des systèmes appropriés de management du temps, des informations et du personnel ont été exposées face au problème de réalisation de la mission éducative.

Mots clés:

Management, Organisation comptable et financière, Etablissement Scolaire, Education Lasallienne.

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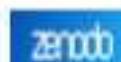
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THE MANAGEMENT AND THE ACCOUNTING AND FINANCIAL ORGANIZATION SYSTEM OF LASALLIAN SCHOOLS IN MADAGASCAR

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ABSTRACT

The purpose of this article is to help school officials improve their management system and their accounting and financial organization system. The research was carried out among Lasallian schools in Madagascar through the organization of two sessions in 2019 and 2020. The investigation, evaluation and observation were focused on the activities of planning, organization, direction and control. Faced with the problem of achieving the educational mission, the suggestions are based on improving the practice of accounting and financial organization accompanied by appropriate systems of time, information and personnel management.

KEYWORDS:
Management, Accounting and financial system, School, Lasallian Education.

INTRODUCTION

In the current context, education in both public and private institutions is a research area [1] at all levels: primary, secondary [2] and university [3], [4]. In this case, the main problem lies in the realization of the educational mission. This article attempts to improve the management of the school. The research was carried out in Lasallian schools in Madagascar given its existence in all regions of the country: from kindergarten to university studies, from classical studies to professional studies. Preschool education is aimed at awakening and opening up to socializing and educational activities. Primary education is sanctioned by obtaining the Certificate of Primary and Elementary Studies for the transition to secondary school. The college is the secondary level establishment where students strengthen the acquisition of fundamental knowledge. The Lycée is a public secondary school. It welcomes students from the second to the final year (3 years of study) and prepares for the baccalaureate. Higher education is accessible by selection or through an entrance examination reserved for candidates with a baccalaureate. The Lasallian educational mission in Madagascar is over 150 years old. The Saint Joseph Andohalo school was the first school run by the first three Brothers of the Christian Schools who arrived in the Big Island on November 24, 1866 [5]. It should be noted that the Lasallian educational presence at the international level is currently in 79 countries with more than 90,000 educators, more than 4,500 brothers and nearly a million pupils at the school level and students pursuing higher studies. Historically, John Baptist de La Salle, Founder of the Brothers of the Christian Schools, and his first Brothers chose to exercise their apostolate as Christians mainly through the school. In his pedagogical writings, he describes the basic

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educational attitudes that he recommends to teacher-educators: Make sure that you have kindness and affection for the children you teach and share common principles [6]. Thus, the question arises: how to ensure the management and the accounting and financial system of the school within the framework of Lasallian education? To answer this question, it is necessary to show a literature review on management and the accounting and financial system before viewing the methodology and results of the research.

LITERATURE REVIEW

In the education system, the school undoubtedly appears as the most visible element in order to ensure the integration of training and research practices [7]. The literature shows that any organization, like a school, requires action to regulate and dispose of well. In other words, it is management as the art of leading and leading an organization. In general, the basic management activities consist of Planning, Organizing, Leading and control using means (human, financial, material, informational, and temporal) in order to achieve specific objectives.

Planning. Management should establish a long and medium term strategic plan (more than one year). It has to take it to the board for approval. The strategic plan includes the vision, mission, environmental scan, analysis of strengths, weaknesses, opportunities and threats, goal and strategy [8]. Following the approval of the strategic plan by the Board of Directors, the management must raise awareness and communicate to the various bodies (Department, service, etc.) the strategic orientations of the organization with a view to each drawing up the operational plan. To make the strategic plan a reality, each organ must periodically establish (annual, monthly, weekly or even daily) an operational plan in relation to the strategic plan. The operational plan includes the objective, activities, resources, budget and timetable.

Organization. The concept of organization always starts from the classic approach around the division of labor and structure. By way of illustration, Weber M. [9] defined a rational, divided organizational structure with a clear job hierarchy, with much formalized work procedures, and a very centralized control system. For Charpentier Pascal (1998) [10], the term structure refers to the general architecture of the company, represented schematically by an organization chart. There are three organs. Staff organs advise and assist in the preparation of their decisions. Operational or operating bodies participate directly in productive and commercial activities. The functional services provide support activities to the operational bodies within the framework of a specific function: finance and accounting.

Direction. The leadership process involves driving the performance of team members, providing feedback, resolving issues and managing changes to optimize the performance of the facility. The leadership styles according to Likert [11] are, first of all, the autocratic or authoritarian style: the leader decides and acts alone. He does not take part in the execution but controls and sanctions. Then it is about the paternalistic style: the leader makes threats and rewards as a means of incitement. There is little decentralization for minor decisions and everyone seeks to be appreciated by the hierarchy instead of developing a team spirit. Then, it is about the democratic or participatory style: the leader involves in the decision and the modalities of execution and it is the group which judges the group. Finally, it is about the laissez-faire style: the leader lets things happen without intervening; decisions are made in the dark and he does not communicate his assessments to his subordinates. Leaders get the job done with the team and other stakeholders. Successful leaders have balanced technical, interpersonal, and conceptual skills that enable them to analyze situations and interact appropriately. Important interpersonal skills are based on leadership, that is, the interpersonal influence exerted in a given situation and directed by a process of communication towards the achievement of a specific goal (R. Tannenbaum, 1961) [12].

Control. It is a process by which leaders ensure that resources are used effectively and efficiently to achieve organizational goals (Anthony and Dearden, 1976) [13]. The control system depends on two criteria: the possibility of measuring results and knowledge of the activity process (Ouchi, 1979) [14]. The purpose of the control process is, first of all, to analyze the results in relation to the objectives or standards, then to analyze the means used in relation to the forecast, then to analyze the deviations and finally to propose corrective measures. In general, the foundations of internal control are based on the principle of organization, the principle of

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integration, the principle of permanence, the principle of universality, the principle of independence, the principle of information and principle of harmony. For the organizational principle, the organization must be established under the responsibility of the head of the entity. It includes setting objectives, defining a corresponding program, and choosing and extending the means to be implemented in order to achieve them. This organization must be preliminary, adapted and adaptable according to the environment and external constraints, verifiable, formalized and it includes a separation of tasks. This is why we only control what is organized. The principle of integration means that good internal control must point out any errors or anomalies. This is implemented through cross-checks, reciprocal controls and technical means which limit human intervention. The principle of permanence indicates that internal control and the organization itself put in place assume the sustainability of its systems. The principle of universality states that internal control concerns all people in the company without exception, at all times and in all places. The principle of independence implies that the objectives of internal control are to be achieved independently of the methods, processes and means of the company. The principle of information explains that information is both one of the objectives of internal control and one of its means "to be informed is already controlled". Information must meet certain criteria: relevance, usefulness, objectivity and communicability. The principle of harmony evokes the need for an adequacy of internal control to the characteristics of the company and its environment.

Accounting and financial organization. The concept of accounting and financial organization refers to the basic concepts of accounting in the general chart of accounts in force. From this perspective, the accounting conventions are based on several commitments: the convention of the entity, that is to say, there must be a clear separation between the accounting of the entity and that of the natural or legal persons who direct it. or who constituted it or who contributed to its development. The Monetary Unit Convention is about the need for a single unit of measurement to record a company's transactions. The going concern agreement, that is, the entity will continue to operate for the foreseeable future. The exercise convention linked to the recognition of transactions on the basis of established rights, that is to say on the date of occurrence of these transactions or events and not when the corresponding cash flows occur. For decision-making purposes, financial statements must ensure transparency about the reality of the entity by presenting complete and useful information. From this perspective, the qualities of information are characterized by intelligibility, relevance, reliability and comparability. Understandability enables any user with reasonable business knowledge, and willing to study information reasonably and diligently, to easily understand financial statements. Relevance means when it can influence the economic decisions of users by helping them assess past, present or future events.

The reliability shows that all financial information is free of errors, omissions on the basis of the faithful image (taking into account the supporting documents). Comparability indicates the consistency of information from one financial year to another. The fundamental accounting principles concern the principle of independence of financial years, the principle of materiality, the principle of prudence, the principle of consistency of methods, the principle of historical cost, the principle of intangibility of the opening balance sheet, principle of substance over form and principle of non-compensation. The principle of independence of financial years means that the result of each financial year is independent (financial year is equal to an accounting year which is in principle the calendar year). The principle of materiality (materiality threshold) makes it possible to highlight in the financial statements any significant information, that is to say any information that may have an influence on the judgment that the users of the information may make on the entity. The principle of prudence makes it possible to avoid the transfer of risk into the future, of uncertainty liable to put a strain on the assets or results of the entity. It consists of recording a charge as soon as its existence is probable. The principle of consistency of methods ensures the consistency and comparability of accounting information. The principle of historical cost shows the recording of value at the date of recognition of assets, liabilities, expenses or income. The principle of intangibility of the opening balance sheet indicates the correspondence of the opening balance sheet N + 1 with the closing balance sheet for year N. The principle of substance over form takes into account the financial and economic reality of the operations and not of their legal appearance. The principle of non-offsetting means that offsetting between asset and liability items or between expense and income items in the income statement is not authorized except in cases where it is provided for or required by accounting regulations.

This notion is linked to the financial organization system. Researchers [15], [16] argue that this system requires procedures allowing both internal and external organization. Documentation describing these procedures is normally the responsibility of management.

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In the context of this research, the school management system is linked to the accounting and financial organization. This idea leads to the formulation of three hypotheses: H1, H2 and H3.

H1: The school carries out the activities of planning, organization, management and control.

H2: The school respects the basic concepts of accounting.

H3: The school has a good financial organization system.

METHODOLOGY

Faced with the hypotheses thus cited, two educational sessions were organized for Directors, Treasurers and Managers within Lasallian establishments in Madagascar. The first session took place in October 2019 to conduct investigations and study the school management system and its accounting and financial organization. The second took place in February 2020 to assess, observe and resolve any difficulties encountered while carrying out the work.

During the investigation, Directors, Bursars and other Managers were asked to explain their experiences in the management of the establishment and their accounting and financial organization practices. The purpose of this process is to identify the main problems linked to the functioning of each establishment. The information obtained made it possible to analyze the factors blocking the educational mission.

During the assessment and observation, three essential elements were retained. It is a question, first of all, of respect for qualification standards, then of respect for operating standards and finally the requirement of moral and professional qualities. For qualification standards, the mission, powers and responsibilities have been formally defined in advance. The evaluation approach was in accordance with the principle of independence and objectivity. It was carried out with competence and professional conscience. For operating standards, the purpose of the evaluation was to ensure that it brings added value to the Lasallian establishment. It was studied the management processes of the school and contribute to their improvement on the basis of a systematic and methodical approach. In other words, the evaluation system has been planned and organized. The plan specifies the scope of intervention, the objectives, the date and duration of the study, as well as the resources allocated. The organization made it possible to properly structure the educational session with the appropriate means in Soavimbahoaka Antananarivo, seat of the congregation of the brothers of the Christian schools in Madagascar. The moral and professional qualities adopted were oriented towards professionalism, professional competence, confidentiality, objectivity and integrity (honesty and morality). The educational sessions were able to bring together 60 individuals as Directors, Bursars and other Responsible at the level of Lasallian establishments in Madagascar. The evaluation and observation approach adopted made it possible to bring out results through the conformity test of each element of the research.

RESULTS AND DISCUSSIONS

The research results are made up of three elements. First, the carrying out of planning, organizing, directing and controlling activities as a result of investigation, evaluation and observation on is as follows:

Elements	YES	NO
Planning	X	
Organization	X	
Direction	X	
Control	X	

Table 1. Compliance test on the management system

The Lasallian school management system follows the guidelines for organizing the classroom according to the Montessori method. They are based on good lighting, accessibility to materials, existence of defined spaces, availability of space dedicated to peace and reflection, presence of reading areas, good design, and freedom of the teacher, the display of pictures on the walls, the installation of small furniture and the presence of plants. It has been found that school management consists of guiding and keeping students in touch with learning tasks. This corresponds to the approach of Renald Legendre (1993) [17] on time and space, the program of activities,

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codes, rules and procedures, the system of responsibilities, the system of relations, the system of assessment and recognition as well as human and material resources.

The planning, organization, management and control systems adopted have been observed to be effective and efficient. The Lassalien School follows the Japanese Kaizen method based on the 5S. It is about selecting (Seiri), locating (Seiton), scintillating (Seiso), standardizing (Seiketsu) and following (Shitsuke) [18], [19]. First, it consists of sorting all the objects at the workstation and keeping only what is useful on a daily basis. Second, the approach is based on the storage of all useful objects. A place for everything, everything in its place. In this case, their principles are to get rid of unusable objects, to place away from the workstation if the frequency of use of the object is assessed at once a year, to place near the workspace if its use is done monthly, to be placed near the workstation if it is used once a week and to be kept near the user for all daily use. Third, the purpose of the system is to clean, paint and prevent sources of dirt. Fourth, the method to be adopted focuses on standardization. That is to say, there is an establishment of rules and working methods defined and respected by the team; use visual standards (photo, marking, etc.) which make it easy to know the locations of objects. Recently, research has revealed the system put in place to ensure rigorous monitoring of standards in order to keep workplaces clean and in order through training and animation of staff, internal audit and improvement of standards.

Second, the compliance test after investigating, evaluating and observing adherence to basic accounting concepts is as follows:

Elements	YES	NO
Accounting conventions		X
Characteristic qualities of financial information		X
Fundamental accounting principles		X
Assessment methods		X
Specific rules or practices		X

Table 2. Compliance test on the accounting system

The basic concepts of accounting on accounting conventions, the characteristic qualities of financial information, fundamental accounting principles as well as on the valuation methods to prepare and present its financial statements are not respected. The same applies to non-compliance with specific rules or practices applied by the school. The financial statements relate to the balance sheet, the income statement, the statement of changes in equity, the cash flow statement, the appendix are not, in fact, well established according to accounting standards.

Most recently, the compliance test following the investigation, evaluation and observation of the financial organization is as follows:

Elements	YES	NO
The financial system procedure		X
Availability of financial documents		X
The availability of cash to meet needs		X
Periodic inventory of assets and liabilities		X

Table 3. Compliance test on the financial system

There is a lack of document showing the financial organization procedure of schools. In addition, proper financial documents are not available. The financial resources which are formed mainly by schooling and tuition fees are so insufficient compared to the expenditure forecasts during the school year. Given the poverty of the majority of parents of students, they are unable to pay for school fees on time. This situation obviously has an impact on the payment of salaries and vacations for teaching staff at the school. In addition, the assets and liabilities of the school are not annually inventoried in kind in quantity and value, on the basis of physical checks and physical census.

According to the research carried out, the first hypothesis on the realization of planning, organization, direction and control activities at the level of Lasallian schools in Madagascar is verified. However, the two assumptions

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which are respectively based on the accounting and financial organization are not validated. Faced with this situation, it is suggested that schools keep a journal book, a ledger and an inventory book. The journal records the movements affecting the assets, liabilities, equity, expenses, and income of the school by at least monthly summary of the totals of the transactions recorded. The accounting organization system must comply with the chart of accounts in force. To cope with financial difficulties, it is suggested that schools work in collaboration with technical and financial partners, both national and international. The efforts of officials supported by external aid will push each establishment to achieve their development objectives. However, there is a need for good cash management. This system is based on cash management. Each school can only keep in the fund the sum to cover the expenses provided for in the cash flow plan and the rest must be deposited in the bank.

CONCLUSION

Finally, Lasallian schools have considerable experience in the Big Island. However, the adopted management system deserves special attention. Improvements in the accounting and financial organization have been presented in this article. The realization of these suggestions may be more interesting if there are appropriate systems of time, information and personnel management. The time management processes are the following steps. This involves defining the activities, organizing the activities in sequence, estimating the resources required for the activities, estimating the duration of the activities, developing the schedule and controlling the schedule. To do this, you have to organize the ephemeris and the schedule. The organization of information is based on data collection and classification and computerization. It must relate to the management of communications according to the processes of stakeholder identification, communications planning, information dissemination, stakeholder management and performance management. The allocation of staff should follow the principle of "the right person in the right place". It is advisable to build and develop the team. Team building involves confirming the availability of human resources and acquiring the necessary team to perform the work. The purpose of team development is to improve skills, the interaction between team members and the overall team environment, in order to improve the performance of the facility.

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ARTICLE SCIENTIFIQUE N°8

GESTION DES RISQUES LIÉS A LA REALISATION DE PROJET DANS UN PAYS EN VOIE DE DEVELOPPEMENT

GESTION DES RISQUES LIES A LA REALISATION DE PROJET DANS UN PAYS EN VOIE DE DEVELOPPEMENT

par

Pierre Benjamin RAKOTOMAHENINA

Résumé

Le risque est inhérent à tout projet. Comment économiser les risques liés à la réalisation d'un projet ? Concevoir et réaliser des projets sans risque, sinon, avec le minimum de risques dans un pays en voie de développement est l'objet de cet article. L'élaboration d'une méthode de réduction ou d'élimination des risques de projet à travers d'une intégration de la théorie et de la pratique a été menée en 2007 et 2008 à Madagascar suivant la qualité des informations scientifiques et pratiques. Les coopérations du promoteur de projet avec des bailleurs de fonds, des anciens bénéficiaires de financement et des évaluateurs de projet permettent de diminuer ou de supprimer des incertitudes inhérentes au financement, à l'asymétrie d'information et aux aléas externes d'un projet.

Mots clés : Gestion de projet, gestion de risque de projet, méthodologie de projet, pays en voie de développement

Abstract

The risk is inherent in any project. How to reduce the risks associated with a project ? Designing and executing projects safely, at last, with minimum risk in developing countries is the basis of this work. The working out of a project risk reducing or eliminating method was conducted in 2007 and 2008 in Madagascar based on the quality of scientific and practical information. The cooperation of the project developer with donors, past beneficiaries of funding and project evaluators permit to reduce or eliminate the uncertainties associated to funding, information asymmetry and external hazards of a project.

Key words : Project management, management of project risk, project Methodology, developing countries

INTRODUCTION

Actuellement, la nouvelle orientation de la politique économique de plusieurs pays, que ce soient les pays industrialisés ou ceux en voie de développement, se manifestent par l'acceptation d'une économie ouverte et axée sur le marché. Mais le mécanisme de l'économie de marché est plus particulier en Afrique où la pauvreté et le VIH/SIDA sévissent encore dans la frange de la population considérée comme clientèle. C'est la raison pour laquelle les investisseurs ne se lancent pas aveuglément dans une injection massive de fonds sans avoir effectué, au préalable, une étude très approfondie et réaliste des risques liés à la réalisation du projet. Comment économiser alors les risques liés à la réalisation d'un projet dans un pays en voie de développement ? La réponse à cette question nécessite d'abord une notion de base sur le projet.

En matière de projet, il existe plusieurs définitions possibles et valables. D'après un Dictionnaire de management de projet, «il peut être défini comme un ensemble d'actions à réaliser pour satisfaire un objectif[1] déterminé, dans le cadre d'une mission précise, et pour la réalisation desquelles on a identifié non seulement un début, mais aussi une fin».

Cette définition est formulée par l'auteur suite à la synthèse de quelques dizaines de définitions, plus ou moins cohérentes. La norme ISO 10006 (1998) considère un projet comme un «processus unique qui consiste à un ensemble d'activités coordonnées et maîtrisées comportant des dates de début et de fin, entrepris dans le but d'atteindre un objectif conforme à des exigences spécifiques telles que les contraintes de délais, de coûts et de ressources».

De notre part, un projet se définit comme un ensemble d'activités programmées, dans le temps et dans l'espace, en utilisant des moyens précis et appropriés pour répondre à un besoin donné en vue d'atteindre un objectif bien défini. Les définitions du projet sont alors nombreuses mais se ramènent pratiquement aux mêmes impératifs (VILON Jacques, 1991) : un objectif à atteindre, dans un temps défini et pour un coût prédéterminé. Ces différentes variables qui caractérisent un projet peuvent être réalisées dans diverses phases indépendantes et en continuité les unes des autres. L'ensemble des phases du projet forme le cycle du projet.

La gestion de projet est ainsi comme un processus cyclique comprenant plusieurs activités reliées : la définition, la planification, l'exécution et le contrôle (WINTER, 1996). L'émergence de l'idée de projet jusqu'aux différentes réflexions sur son opportunité constitue la première phase. La planification du projet consiste en la préparation en définissant les buts, en étudiant le milieu d'intervention, en identifiant le projet, en mettant en place les stratégies de mise en œuvre et en programmant toutes les activités à entreprendre. Cette étape est axée sur les études approfondies pour arriver au montage du dossier. La phase suivante touche l'utilisation des ressources en appliquant les stratégies et processus pour atteindre les objectifs : c'est l'exécution du projet. La dernière qui concerne le contrôle est basée sur le suivi et l'évaluation du projet.

En tenant compte de cette notion, l'objectif est de réaliser le projet tout en évitant les risques inhérents au cours de sa phase de vie. CHAPMAN (1997) montre ce risque comme la possibilité d'une perte économique et financière, d'un dommage physique ou d'un délai (non respecté) comme conséquence d'une situation incertaine. Cette incertitude peut être liée à l'asymétrie d'information, aux aléas externes et aux problèmes à de financement du projet. Nous prendrons en compte ces différents éléments pour baser une méthode de réduction ou d'élimination de risque attaché à la réalisation d'un projet.

I. DEMARCHE D'ECONOMIE DE RISQUE

Une recherche basée à la fois sur l'économie d'incertitude liée à l'asymétrie d'information, sur l'économie d'incertitude résultant des aléas externes et sur l'économie d'incertitude attachée au financement du projet a été menée pour situer une méthode de gestion de risque de projet dans les pays en voie de développement. Dans cette optique, nous faisons référence au concept de CHANAL (1997) sur cette approche. Selon l'auteur, le principe consiste à élaborer des connaissances portant davantage sur la manière d'agir (procédure) que sur le contenu (substance) c'est-à-dire des outils aptes à élaborer, expliciter, critiquer des convictions dans des situations décisionnelles déterminées. Cette disposition nous conduit à adopter une démarche axée sur l'élaboration d'une méthode par l'intégration de la théorie et de la pratique.

L'étude sur terrain a été effectuée à Madagascar. Cette grande île qui se situe dans le continent africain est encore actuellement un pays en voie de développement. Depuis quelques années, ce pays s'est engagé dans un processus de développement rapide et durable. Cette volonté politique trouve son écho dans les plus hautes instances de l'Etat, d'abord à travers la vision pour « Madagascar naturellement », matérialisée par le «Madagascar Action Plan» (ou MAP). Ce programme favorise l'économie libérale en incitant l'initiative privée pour une participation de plus en plus active au développement du pays. Le secteur privé est donc considéré comme un puissant levier de croissance économique. Pour rendre effective cette politique, l'Etat a poursuivi l'un de ses plans d'action tel que la promotion aux investisseurs et aux bailleurs de fonds à travers le système 3P (Partenariat Public et Privé). Ainsi, le contexte actuel encourage alors les opérateurs économiques tant nationaux qu'étrangers à venir et à réaliser massivement leurs projets de création d'entreprise sur le territoire malgache.

Pourtant, cette situation ne signifie pas que les promoteurs de projet s'investissent directement dans le pays sans apporter une attention particulière aux différents paramètres en tant que facteurs de risque au projet. Pour contribuer à notre méthode de gestion de ce risque, nous avons opté pour l'utilisation du principe de «Boule de neige». Le principe est simple, on commence par interroger cinq (5) spécialistes dans le domaine de projet. C'est-à-dire, ces élites représentent au moins 10% des sortants des institutions supérieures. Puis on leur demande de nous citer quels sont les noms des autres experts qui pourraient répondre à notre questionnaire, et ainsi de suite. Selon la liste donnée par le Ministère chargé de l'éducation nationale et de la recherche scientifique, on compte 21 instituts homologués[2] en 2007. A noter que nous avons opté pour les institutions supérieures au sortir desquelles les experts sont supposés capables de concevoir et de gérer des projets. Pour prendre en compte les expériences de ces institutions, nous avons choisi plus particulièrement celles qui ont déjà obtenu l'homologation par l'Etat. Le nombre de personnes enquêtées s'élève alors à 105 individus, soit 5 personnes par institution.

La présente recherche nécessite les pratiques, d'un côté, des enquêtes exploratoires, descriptives et explicatives et de l'autre côté, des entretiens non directifs, entretiens semi-directifs et entretins directifs en fonction de l'objet de l'enquête. Dans ce cas nous avons prévu 1h30 pour la durée de l'entretien. Pour mener à bien l'enquête, nous avons suivi les principes suivants : prévision d'un taux d'échec d'environ 10% (personnes indisponibles, refus, ...) et fixation d'au moins 70% des rendez-vous sur l'agenda avant le début de l'enquête en prévoyant deux rendez-vous par jour si l'on vise un plan local ou s'il y a la possibilité de les regrouper sur un même lieu.

Les collectes des données qui ont eu lieu au cours du mois de janvier au mois de juin 2007 et 2008 ont suivi la qualité des informations scientifiques et pratiques préconisée par HARVATOPOULOS Yannis & FREDERIC Yves- (1989, p.3). Les critères scientifiques regroupent trois éléments de base tels que la précision (l'information doit être claire, juste et exacte), l'objectivité (l'information doit être fidèle et exempte de partialité) et la validité (l'information doit être conforme à l'élément réel qu'elle présente). Cependant les critères pratiques concernent la pertinence (l'information doit convertir au problème défini), la recevabilité (l'information doit être au moins en partie admissible par ceux auxquels elle s'adresse), la rapidité de l'obtention et le coût de l'obtention. Cela nous a permis de collecter et de traiter l'information dont l'analyse pourra servir à une meilleure connaissance des risques d'un projet et éventuellement à la recherche d'une solution.

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[1] Un objectif est une finalité du projet ou d'une partie du projet, l'objectif constitue un Jalon intermédiaire ou final ; atteindre l'ensemble des objectifs permet l'exécution complète du projet.

[2] La mise en place de l'accréditation est encours actuellement à Madagascar

II. UNE ECONOMIE DE RISQUE BASEE SUR LA COOPERATION

A l'issue de notre étude, la gestion des risques attachés à la réalisation d'un projet dans un pays en voie de développement peut s'effectuer selon les trois angles suivants. En premier lieu, les promoteurs de projet sont tenus de coopérer avec des bailleurs de fonds et de suivre leurs directives. Ce concept se situe au premier plan, avec des réponses de 48% des enquêtés, pour éviter le problème de financement. Lors de la conception d'un projet, il est primordial d'élaborer un projet selon les recommandations des bailleurs de fonds. Il peut arriver qu'il existe des conditions spécifiques requises par chaque bailleur de fonds. Quoi qu'il en soit, les promoteurs de projet sont tenus de respecter les directives des bailleurs pour que le projet soit finançable. Cependant, comme tout projet, celui-ci nécessite un appui financier tant en crédit d'investissement qu'en crédit de fonctionnement. La confiance des institutions financières ou bailleurs de fonds se fonde sur la justification de l'utilisation des crédits demandés et surtout sur la rentabilité du projet et la capacité de remboursement d'emprunt. La relation avec le bailleur de fonds consiste alors à déterminer l'idée centrale relative à ses priorités et à ses centres d'intérêt dans le but de mettre l'accent sur l'originalité du projet, à éviter des projets dépassés et sans intérêt de nos jours, à faire apparaître toute coopération ou collaboration favorisée par le projet, à assurer que le projet peut être réalisé avec un budget réaliste et à veiller à le convaincre que le problème soulevé peut être résolu par le projet.

En second lieu, l'élaboration de dossier de financement nécessite en priorité une économie des risques liés à l'asymétrie d'information tout en coopérant avec des anciens bénéficiaires de financement et des anciens évaluateurs de projet. Dans cette optique, ce concept est de l'ordre de 32% des réponses des acteurs de projet enquêtés. La relation avec les anciens bénéficiaires de financement a pour objectif de connaître notamment la nature des contacts établis avant d'entamer la rédaction du projet, la personne au sein de l'équipe du bailleur pouvant mieux assister, d'évaluer la nécessité d'une intervention extérieure, d'identifier les documents de référence à orienter, d'obtenir les renseignements relatif au déroulement de la visite (s'il y lieu) avant la décision de financement, de déterminer la possibilité de négociation du budget avec les conditions et d'apprécier la réceptivité du bailleur de fonds relative à une version préliminaire avant la réception du projet final. Cependant la relation avec les anciens évaluateurs de projet justifie par le besoin de disposer des informations sur le processus de sélection de l'évaluateur, le type d'évaluation, par exemple un système de points afin de savoir l'importance de chaque partie du projet, les indications sur le point ou partie du projet à accentuer, les erreurs les plus courantes relevées dans les projets examinés afin d'éviter de les faire nous-même, le pouvoir discrétionnaire du personnel du bailleur lors de la prise de décision finale. De plus il est nécessaire de savoir s'il s'agit d'une évaluation par correspondance ou d'une évaluation par un groupe d'experts. Dans le premier cas, le processus peut être détendu, l'évaluateur pouvant prendre connaissance du projet de façon plus agréable et minutieuse. Les évaluations par un groupe d'experts se font souvent sous pression et ne permettent pas un examen approfondi par chaque expert.

En troisième lieu, l'économie des risques attachés aux aléas externes figure parmi les éléments essentiels pour qu'un projet ait une forte probabilité de réalisation dans un pays en voie de développement. Cela représente 20% des propositions des personnes enquêtées. Pour ce faire, il faut, tout d'abord, étudier le potentiel du marché notamment sur le plan économique tout en considérant la pauvreté et au niveau démographique en tenant compte du risque de propagation des maladies telles que la tuberculose et surtout le VIH/SIDA. Ensuite, l'environnement réglementaire doit être étudié surtout dans le cadre des barrières à l'entrée (restrictions éventuelles à l'exportation, à l'importation et à la production) et la législation sociale et fiscale. Enfin, il est important d'évaluer la stabilité politique et institutionnelle dans le pays d'implantation surtout au niveau des troubles sociaux pouvant conduire à une crise socio-économique et au niveau du risque de modification défavorable de la réglementation en vigueur. Les analyses de ces aléas constituent, selon notre étude, les principaux facteurs pour éviter la réticence des investisseurs à réaliser leurs projets.

III. POURQUOI COOPERER ?

Notre concept de gestion des risques liés à la réalisation d'un projet met en exergue les coopérations du promoteur de projet avec, d'un côté, les bailleurs de fonds et, de l'autre côté, les bénéficiaires de financement et les évaluateurs de projet. Ces coopérations montrent l'importance des théories transactionnelles [WILLIAMSON, 1975, 1985] et leurs dérivés comme la théorie de l'agence [JENSEN & MECKLING, 1977]. Ces théories privilégient l'analyse des coopérations par le biais des relations de transaction, au regard d'un continuum entre le marché et la hiérarchie, ou entre l'externalisation et l'internalisation. De plus, RICHARDSON, dans sa publication de 1972, envisage les coopérations comme des formes d'organisations à part entière, mode de coordination «ex-ante» d'activités complémentaires ou concurrentes.

En tenant compte de la base de la coopération [DAMERON S., 2000] allant de la relation individuelle dans le travail [DEJOURS Christophe, 1993] jusqu'aux relations interentreprises [HEITZ Michèle, 2000], son évolution majeure, dans l'histoire du management, est marquée par la quasi-intégration. Ce concept d'AOKI (1986, 1988) constitue non seulement une forme d'organisation stable, mais de plus, il permet de générer une «quasi-rente relationnelle». Pour démontrer la supériorité de cette forme organisationnelle (la quasi-intégration) par rapport au marché et à l'organisation, la démarche d'AOKI se situe dans le cadre de la construction et la comparaison des caractéristiques de la firme américaine (firme A) et la firme japonaise (firme J). Il oppose ainsi l'organisation de la firme A à la quasi-intégration de la firme J. La quasi-intégration correspond à une troisième piste d'allocation des ressources tandis que les deux autres étant constituées par le marché et par la firme.

Nous pensons que la coopération est également une forme d'organisation économique mais dans la mesure où elle permet de réduire le risque voire d'éliminer le risque lié à la réalisation d'un projet. La coopération avec le bailleur de fonds au cours de laquelle on suit leurs directives conduit à une forte probabilité de réalisation du projet. Les relations avec les bénéficiaires et évaluateurs permettent de canaliser le projet sur la voie de sa réalisation. La collaboration avec les spécialistes dans un domaine donné permet d'assurer la pérennisation et la faisabilité technique, financière et organisationnelle du projet. La combinaison de ces formes de coopération permet, en effet, de favoriser davantage l'économie des risques liés au financement, à l'asymétrie d'information et aux aléas externes du projet.

IV. COOPERER POUR ECONOMISER LES RISQUES DES L'ELABORATION DU PROJET

Au cours des phases de vie d'un projet, nous devons axer tous nos efforts sur la coopération plus particulièrement en amont du projet [BASSETTI Ann-Laure, 2002], c'est-à-dire au moment de l'élaboration du projet, pour qu'il se réalise. Les aléas externes et l'asymétrie informationnelle entre le promoteur du projet et le bailleur de fonds conduisant à la remise en cause du financement du projet peuvent être économisés à travers des relations étroites du promoteur du projet avec le bailleur de fonds, des anciens bénéficiaires de financement et des évaluateurs d'anciens projets. C'est dans la dynamique de négociation avec ces entités que se construit la coopération. La négociation est en effet une «série d'entretiens,

de démarches qu'on entreprend pour parvenir à un accord, pour conclure une affaire[3]». Un accord sur des règles de partage autorise des échanges d'information et facilite la coopération dès lors qu'elle s'avère productive que la défection. C'est une stratégie conditionnelle donnant-donnant modélisée par AXELROD (1984) : on coopère si l'autre fait de même. Suivant le dilemme du prisonnier, cette stratégie conditionnelle s'avère plus efficace face à l'asymétrie d'information, à la probabilité de présence d'aléas externes et au problème de financement d'un projet.

Le choix d'un bailleur de fonds doit avoir lieu suite à une étude détaillée de la mission et des procédures des bailleurs de fonds en liaison avec l'idée et l'organisation. Après avoir choisi le bailleur de fonds, on peut, par la suite, contacter directement un chargé de programme ou un autre représentant du bailleur de fonds choisi afin d'explorer plus en détail la faisabilité du projet. A noter que le personnel du bailleur de fonds pourrait gagner beaucoup de temps si les projets inappropriés étaient rejetés précocement et s'il recevait uniquement ceux correspondant aux missions du bailleur. Mais si la relation avec le personnel du bailleur a été fructueuse, ce dernier peut communiquer les noms d'anciens bénéficiaires et fournir une liste d'anciens évaluateurs. Même si ces noms ne sont pas fournis directement par le bailleur, le recours à une personne ayant monté un projet couronné de succès est encore une autre démarche. C'est, d'un côté, une opportunité de disposer de nouvelles informations sur le programme du bailleur de fonds, et de l'autre côté, une piste supplémentaire pour acquérir des informations et mieux adapter le projet aux intérêts et aux priorités du bailleur de fonds. Les relations avec ces entités peuvent suivre la norme ISO 10006 (1998) qui décrit le processus de management des risques en quatre phases: identification, évaluation, élaboration de la réponse et maîtrise. Cette dernière phase consiste à mettre en œuvre des actions de prévention, en intervenant sur les causes afin d'éviter que les événements redoutés surviennent lors de l'exécution du projet.

En effet, la base de la coopération avec les bailleurs de fonds, les anciens bénéficiaires et les anciens évaluateurs de projet est de contribuer à la résolution du problème de financement du projet. De plus, elle favorise la disposition des informations permettant d'éviter l'imperfection d'information entre le promoteur du projet et le bailleur de fonds. Cela permet également d'assurer le maximum de probabilités et de conséquences positives et de réduire au minimum la probabilité et les conséquences d'aléas externes allant à l'encontre de la réalisation d'un projet.

V. ECONOMISER LES INCERTITUDES DE REALISATION D'UN PROJET

L'économie de risque lié à la réalisation d'un projet consiste à attaquer le problème de financement [BERNOU Nacer (2005)] et à gérer l'incomplétude de contrat [CAHUE Pierre, 1993] due à l'incertitude pouvant conduire à l'empêchement de l'implantation du projet. Pour réaliser un projet, la gestion de risque peut se situer à trois niveaux : l'économie de risque attaché au financement, l'économie de risque lié à l'asymétrie d'information et l'économie de risque résultant des aléas externes. Notre approche sur la gestion de risque d'un projet est plus particulièrement axée sur la méthode coopérative entre plusieurs entités surtout au cours de l'élaboration d'un projet. Mais selon les travaux de COURTOT (1996; 1998), le management des risques de projet a pour finalité de contribuer à définir de manière plus pertinente les différents objectifs du projet grâce à l'accroissement et à l'amélioration de la qualité des informations recueillies. En outre, l'auteur a mis l'accent plutôt sur la conduite à une meilleure maîtrise du projet en ajustant son pilotage aux diverses évolutions de son milieu et en organisant la réactivité face aux divers éléments susceptibles de se produire et de perturber son

[3] Dictionnaire Le Larousse

déroulement. L'accroissement des chances de succès du projet grâce à une meilleure compréhension et identification des risques encourus et une meilleure définition des actions visent à prémunir l'amélioration de la communication et à favoriser la concertation entre les différents acteurs du projet sur les activités à réaliser. La fourniture d'une meilleure connaissance de la situation du projet et de son niveau d'exposition aux risques facilite ainsi la prise de décision et la définition du niveau de priorité des actions à engager.

Pour bien distinguer notre approche, nous considérons les recherches déjà effectuées dans les domaines de l'économie des risques liés à l'asymétrie d'information, l'économie des risques résultant des aléas externes et l'économie des risques attachés au financement du projet. La comparaison de la gestion de risque de non réalisation d'un projet est donc montrée dans le tableau qui suit :

Tableau comparatif de la gestion de risque

Gestion de risque de non réalisation d'un projet	Recherches effectuées	Notre approche
L'économie de risque attaché à l'asymétrie d'information	**Théorie de l'asymétrie d'information** Exemples : AKERLOF (1970); ARROW (1971); WILLIAMSON (1971) **Gestion de l'incomplétude de contrat dû à l'imperfection de l'information** Exemple: CAHUE Pierre, (1993)	Coopération fondée sur la relation avec le bailleur de fonds, des anciens bénéficiaires de financement et des évaluateurs d'anciens projets
L'économie de risque résultant des aléas externes	**Gestion de l'incertitude externe** Exemple: La découverte (1995)	
L'économie de risque lié au financement du projet	**Economie bancaire** Exemple: BERNOU Nacer (2005)	

V.1 L'économie de risque lié à l'asymétrie d'information

La gestion de l'incertitude correspond à l'économie d'information. La théorie de l'asymétrie d'information ou bien d'information imparfaite est apparue suite à des contributions d'AKERLOF (1970) sur le marché des voitures d'occasion et d'ARROW (1971; 1984) sur le marché de l'assurance. Deux concepts clés définissent le rapport d'asymétrie informationnelle entre deux agents : l'anti sélection (ou la «sélection adverse») et le «risque moral» (ou le «hasard moral»). L'économie d'information tout en tenant compte des hypothèses comportementales (rationalité limitée et opportunisme des acteurs de projet) selon WILLIAMSON (1971) porte une attention particulière face à l'incomplétude de contrat.

CAHUE Pierre, (1993, pp.97-98) propose que la gestion de l'incomplétude de contrat peut s'effectuer selon trois modes différents : tout d'abord, les parties décident que les éventualités non prévues par le contrat feront l'objet de négociations ultérieures ; ensuite, les contrats peuvent faire appel à un tiers, un arbitre, chargé de déterminer les actions appropriées dans des situations non explicitement stipulées dans le contrat ; et enfin il est aussi possible de conserver une relation strictement bilatérale selon deux manières différentes.

D'une part, on peut attribuer à l'une des parties le pouvoir de décision dans les situations non prévues contractuellement, sachant que l'autre partie dispose du droit de rupture du contrat, éventuellement à un certain coût. La relation est alors de type hiérarchique. Le contrat de travail est certainement l'exemple le plus courant du contrat incomplet qui stipule

une relation hiérarchique. Evidemment, la relation bilatérale peut être compatible avec un contrôle plus fort que la relation hiérarchique. D'autre part, si l'une des parties prend le contrôle de capital de l'autre, il y a gestion unifiée : l'une des parties absorbe l'autre. Notons que le contrat de travail ne correspond pas à une gestion unifiée, puisque le capital humain d'un individu ne peut pas être acheté par un tiers. En ce domaine, la gestion unifiée est impossible ; elle correspondrait à l'esclavage. La gestion unifiée peut être décidée, par exemple, dans le cas de fusion entre deux entreprises. Dans cette optique, l'entreprise correspond à des relations bilatérales gérées par des contrats incomplets, qui stipulent une relation hiérarchique ou une gestion unifiée.

L'économie de l'information étudie les comportements d'agents confrontés à des problèmes d'acquisition d'information. Dans la théorie des jeux, l'information est incomplète, d'après CAHUE Pierre (1993, p.51) lorsque certains joueurs ne connaissent pas avec certitude les paiements associés aux différentes combinaisons de stratégies. En duopole, chaque entreprise considère qu'une augmentation de sa production entraîne une diminution du prix. Comme un monopole, elle aura donc tendance à restreindre sa production afin de ne pas trop faire baisser le prix de vente. Les situations de pur conflit sont appelés «jeux à somme nulle», car tout ce qui est gagné par l'un est perdu par l'autre et vice-versa. L'exemple type en est le jeu d'échecs, où les joueurs ont des intérêts strictement opposés. Les échecs sont plus précisément un jeu en somme nulle à information complète puisque chaque joueur connaît précisément les conditions dans lesquelles se trouve l'adversaire.

V.2 L'économie de risque résultant des aléas externes

L'économie de l'incertitude touche les aléas externes susceptibles de modifier les conditions de réalisation du projet. Ces aléas externes sont considérés comme l'ensemble de l'environnement pouvant influencer et donc empêcher le fonctionnement du projet. Pour les pays en voie de développement comme Madagascar, il s'agit notamment de la pauvreté et par conséquent les risques de troubles sociopolitiques. Ces aléas conduisant à réduire les investisseurs à réaliser leurs projets. Dans ce cas, la méthode n'est pas conforme aux analyses des comportements stratégiques des acteurs de projet, mais à l'apparition d'événements exogènes au projet. Face à cela, La découverte (1995, p.18) nous montre une illustration sur le cas d'une entreprise X qui accepte de réaliser un projet de construction d'une machine pour l'entreprise Y. Cette dernière a besoin de cette machine pour fabriquer un nouveau produit. Au cours du contrat, elle trouve que le nouveau produit ne sera pas rentable et envisage d'interrompre le contrat alors que la construction de la machine n'est pas achevée. L'auteur suppose que si les parties sont de bonne foi, c'est-à-dire en absence de comportement opportuniste, les parties peuvent simplement s'informer mutuellement des coûts de la continuation ou de l'arrêt de contrat, choisir la stratégie optimale, et diviser d'une certaine manière les bénéfices ou les coûts issus de la solution optimale. Au contraire, si on suppose la possibilité de comportements opportunistes, chaque partie tentera de préserver son intérêt au détriment de l'autre : Y pourra par exemple rompre le contrat sans accorder aucun dédommagement à X, et ce dernier tentera d'imposer à Y la poursuite du contrat. A cet effet, un litige peut survenir entre X et Y.

La théorie des jeux étudie la manière dont les individus rationnels règlent des situations conflictuelles. J. VON NEUMAN[4] et O. MORGENSTERN[5] ont consacré leurs travaux aux situations de pur conflit. Les théories des jeux et l'économie de l'information sont étroitement interdépendantes, dans la mesure où les agents sont souvent à la fois en situation de risque et de conflit.

La plupart des situations dominées par le conflit comportent généralement une certaine dépendance mutuelle. C'est le cas des grèves, des négociations commerciales, de discussion des criminels, des conflits de classe, etc. Ainsi dans une situation aussi problématique qu'une prise d'otage, les preneurs d'otage et les proches de ce dernier souhaitent les uns comme les autres que la négociation aboutisse.

La dépendance mutuelle ne signifie pas un accord amical, mais simplement un comportement qui accorde aux deux parties, un résultat relativement satisfaisant. C'est le cas du dilemme du prisonnier. Il est le jeu le plus connu et le plus discuté par les spécialistes. Il se présente de la manière suivante : deux suspects sont arrêtés pour un délit grave et le juge d'instruction souhaite obtenir leurs aveux. Ils s'entretiennent séparément avec chacun d'eux et leur explique que si aucun n'avoue, on ne pourra retenir contre eux que le port d'armes, ce qui leur vaudra une condamnation réduite : deux ans de prison. Si les deux avouent, ils seront condamnés à cinq ans de prison et si un seul avoue, il est relaxé, tandis que son complice écope de la peine maximum, soit dix ans de prison. Selon AXELROD R., «ce qui rend possible l'apparition de la coopération, c'est le fait que les joueurs peuvent être amenés à se rencontrer à nouveau». La conclusion de son expérience montre que la coopération peut émerger dans un monde d'égoïstes en l'absence de pouvoir central.

V.3 L'économie de risque attaché au financement du projet

L'élaboration du dossier de financement comme le business plan (appelé également plan d'affaires) [MARION Stéphane et SENICOUR Patrick, 2003] est un élément fondamental pour bénéficier du financement des bailleurs de fonds [COPIN Gilles et PILIARD Remy, 1990]. Pourtant, face à l'asymétrie d'information et en tenant compte des aléas externes pouvant influencer le projet, il peut arriver qu'une remise en cause du dossier de financement survienne. En considérant cette situation, BERNOU Nacer (2005) dans sa thèse sur «les éléments d'économie bancaire» a pris l'hypothèse de limites des capacités de l'homme à prévoir toutes les éventualités possibles du futur, c'est-à-dire la rationalité limitée, préconisée par SIMON H. (1983) avec le comportement opportuniste [WILLIAMSON, 1971, 1985]. De ce fait, l'économie de risque lié au financement fait référence à la théorie des coûts de transaction[6]. WILLIAMSON (1988) a consacré des recherches axées sur l'économie de ces coûts de transaction. Il la définit comme une approche institutionnelle comparative qui propose une étude de l'organisation économique où la transaction est l'unité de base de l'analyse. Cette conception diffère de la conception originale de COASE (1937) en atténuant l'opposition entre firme et marché. En effet, WILLIAMSON (1990) met la lumière sur l'existence de formes intermédiaires comme les structures bilatérales (alliance, sous-traitance, partenariat, etc.), ce qui le conduit à l'analyse des types de contrats et à la construction d'une théorie générale du choix des «arrangements institutionnels» [CORIAT et WEINSTEIN, 1995].

La transposition des théories de coûts de transaction et d'asymétries d'information à la théorie bancaire signifie que la relation directe entre bailleur de fonds et les promoteurs de projet est une relation humaine. Elle est naturellement disposée à la rationalité limitée et à l'opportunisme. Alors que le premier facteur comportemental concerne surtout le bailleur de

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[4] John von Neuman (1903-1957) : principal fondateur de la théorie des jeux. Ce mathématicien d'origine hongroise qui s'est installé aux Etats-Unis en 1931, a produit de nombreux travaux sur des ensembles, la mécanique quantique et la logique mathématique. Il a également participé à divers projets militaires, en particulier la mise au point de la bombe atomique. [LECOMTE Jacques, 1999, p.8].

[5] Oscar Morgenstern (1902-1977). Cet économiste d'origine autrichienne s'est installé aux Etats unis en 1935 où il a enseigné jusqu'à1971.en 1944, il a publié en association avec J von Neuman, l'ouvrage fondateur de la discipline Théorie des jeux et comportement économique [LECOMTE Jacques, 1999, p.8].
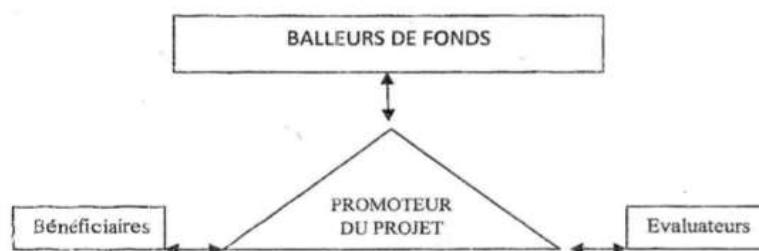
[6] COASE a initié en 1960 l'expression de «coûts de transaction», dans son article «The Problem of Social Cost».

fonds, le second s'attache aux promoteurs de projet. L'apparition d'une banque est alors économiquement justifiée, puisqu'en internalisant la relation de marché, la banque peut élargir la rationalité limitée du prêteur (grâce à sa spécialisation et son savoir-faire) et limiter les comportements opportunistes de l'emprunteur (grâce au monitoring). Par ailleurs, la mutualisation du risque d'insolvabilité des emprunteurs, par le biais de la multiplication et de la diversification des opérations de prêt, permet de réduire le degré de l'incertitude [COUPPEY, 1998, p.60].

Bref, les économies des risques attachés au financement, à l'asymétrie d'information et aux aléas externes d'un projet ne sont autres que des bases fondamentales pour fonder notre approche sur la gestion de risques liés à la réalisation d'un projet dans un pays en voie de développement.

CONCLUSION

Réflexion faite, pour minimiser ou bien éliminer les risques attachés à la réalisation du projet. Nous proposons une méthode, à l'endroit des promoteurs de projet et à ceux qui sont impliqués au projet consistant à porter une attention particulière au cours du montage du projet. L'importance de cette phase de montage du projet nous conduit à concevoir la méthode fondée sur le principe suivant (voir schéma ci-après) : «Coopération fondée sur la relation avec le bailleur de fonds, des anciens bénéficiaires de financement et des évaluateurs d'anciens projets»

Au cours de notre étude, nous avons mis l'accent sur la coopération fondée sur la relation du promoteur du projet avec des bailleurs de fonds, des anciens bénéficiaires de financement et des évaluateurs d'anciens projets. Cette vision peut être qualifiée comme «convergence des résultats». C'est l'origine de la «coopération organique ou solidarité organique». Le fonctionnement du corps constitue un exemple concret pris par FIOL Michel, JORDAN Hugues, SULLA Emili, (2004) pour expliquer cette forme de coopération organique. Les organes d'un corps sont à la fois différenciés par les fonctions et très interconnectés et unis dans leurs finalités. Si chaque membre de l'organisation atteint les résultats sur lesquels il s'est engagé, l'organisation dans son ensemble considère cela comme un succès satisfaisant. Nous pensons que l'arrangement de ces formes de coopération permet de favoriser davantage l'économie des risques liés au financement, à l'asymétrie d'information et aux aléas externes du projet. Nous pouvons remarquer que cette approche est plutôt axée sur la gestion de risque en amont du projet, c'est-à-dire au cours de la définition et la planification du projet.

Pourtant, dès qu'il existe une forte probabilité de réalisation d'un projet, nous devons envisager la gestion de risque non seulement à sa constitution (définition et planification) mais surtout aux phases de l'exécution et de suivi et d'évaluation du projet.

La gestion des risques lors de la conduite de projet consiste à proposer des démarches pour des situations complexes. De ce fait, la conduite d'un projet nécessite de s'organiser, d'utiliser des techniques et de s'appuyer sur une méthode. Les travaux de recherches de GERARD Herniaux (2000) présentent de façon synthétique les procédés permettant de gérer les projets. Mais les projets sont généralement complexes, c'est-à-dire, l'environnement évolue rapidement, les imprévus surviennent, la mobilisation des énergies est difficile, des arbitrages sont nécessaires. Le pilotage dynamique d'un projet doit permettre d'intégrer l'incertitude et la variabilité des situations. L'auteur propose alors un mode de pensée qui prend en compte la complexité. Il aide à acquérir des réflexes mentaux pour maîtriser les projets : il invite à adopter une représentation systématique de la vie d'un projet. Dans cette optique, nous pensons qu'il faut se baser plutôt sur la coopération au sein de l'équipe de projet lors de l'exécution du projet. Cela consiste, d'abord, à former les membres de l'équipe de projet, puis décentraliser avec modération le pouvoir au sein de l'équipe et ensuite pratiquer le jeu collectif et enfin pratiquer le management des Hommes et le management stratégique.

Cependant il faut prévoir également la gestion de risque au cours du suivi et de l'évaluation d'un projet. Comment coacher les employés et améliorer leurs performances ? Comment concevoir et appliquer des vraies techniques d'évaluations ? En d'autres termes, ces questions nous conduisent à chercher des méthodes de coopération permettant aux managers et aux salariés du projet de travailler vraiment ensemble pour le suivi et l'évaluation du projet. Dans ce cas, il consiste à pratiquer le coaching de l'équipe, gérer sa compétence et sa performance, procéder à l'évaluation systématique, contrôler la gestion sociale, établir un tableau de bord social et pérenniser la coopération.

De toute manière, nous pouvons toujours envisager les principes d'économie des risques liés à l'asymétrie d'information et aux aléas externes. Ces nouvelles hypothèses sont considérées comme une large piste de réflexion pour gérer les risques inhérents à tout projet.

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ANNEXE

MODELE DE QUESTIONNAIRES D'ENQUETE

Module1 : Questionnaire pour les Représentants du bailleur

1. Quels peuvent être, selon vous, les risques d'un projet

N°	Critères	Oui	Non	Peut-être	Classer les 3 plus importants	Observation
1	Délais non respectés					
2	Coûts élevés					
3	Perte économique et financière					
4	Dommage corporel et matériel					
5	Objectifs non atteints					
6	Faillite					
7	Inefficacité du projet					
8	Projet non efficient					
9	Non viabilité du projet					
	Autres (à préciser)					

2. Quelles sont, selon vous, les causes conduisant aux risques d'un projet ?

N°	Critères	Important	Peu Important	Classer les 10 plus importants	Observation
1	**Asymétrie d'information**				
1.1	Demande non justifiée				
1.2	Demande justifiée mais insuffisante				
1.3	Non maîtrise de l'offre				
1.4	Part de marché insuffisante				
1.5	Forte pression concurrentielle				
1.6	Etude de marché insuffisante				
1.7	Saturation du marché				
1.8	Concepts marketing non définis				
1.9	Aspect technique non maîtrisée				
1.10	Importation excessive des matières consommables/des matières premières				
1.11	Normes et qualités non respectées				
1.12	Personnel moins qualifié				
1.13	Rétention d'information				
1.14	Comportement opportuniste des responsables				

6. Questions diverses

	Critères	OUI	NON	Si oui lesquels ?	Sinon, pour quelles raisons ?
1	Serait – il (elle) disposé(e) à examiner un pré-projet exposant brièvement le concept du projet ?				
2	Existe-il un formulaire standard à l'usage des évaluateurs ?				
3	Si oui, pourrions-nous obtenir une copie du formulaire ?				
4	Avez-vous des programmes non diffusés ou des fonds inemployés qui pourraient financer le projet ?				
5	Sera-t-il possible d'obtenir de nouveaux financements par la suite ?				
6	Etes-vous satisfaits des propositions de projets reçues				
7	Existe –t-il des limites des requêtes financières				

7. Qui seront les autres bailleurs de fonds pouvant répondre à nos questionnaires ?

	Bailleurs de fonds	Personne(s) à contacter	Adresse/Téléphone
1			
2			
3			
4			
5			
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Module2 : Questionnaire pour les Anciens bénéficiaires

1. Avant l'élaboration de votre projet, quelles étaient vos relations au bailleur de fonds ?

		Oui	Non	Observation
1	Contact par téléphone/mail/fax			
2	Contact direct			
3	Par l'intermédiaire d'un tiers			
4	A l'occasion d'une foire			
5	A l'occasion d'une conférence/un atelier			
6	Visite courtoisie			
7	Autres (à préciser) :			

2. Selon vous, qui au sein de l'équipe du bailleur vous a assisté ?

	Noms et prénoms	Qualité	Adresse/Téléphone	Classer les 3 plus importants
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

3. Quels sont les documents ou les informations que vous avez trouvez utiles lors de l'élaboration du projet ?

	Documents/informations	Important	Peu important	Classer les 3 plus importants	Observation
1	Monographie de la région d'implantation				
2	Madagascar Action Plan				
3	Données officielles de l'Institut National de la Statistique				
4	Textes sur les réglementations en vigueur				
5	Données socio-économiques et environnementales				
6	Revues spécialisées				
7	Autres (à préciser) :				

4. Même si vous avez obtenu un financement, quelles seront vos perspectives?

		Oui	Non	Peut être	Classer les 3 plus importants	Observation
1	Diversification des activités					
2	Extension des activités					
3	Amélioration de la part de marché					
4	Maîtrise du marché local					
5	Ouverture/Renforcement du marché à l'échelle international					
6	Augmentation de l'investissement					
7	Autres (à préciser) :					

5. Quels sont, selon vous, les éléments qu'il faut démontrer clairement pour réduire les risques liés au financement de projet?

	Critères	Oui	Non	Peut-être	Classer les 5 plus importants	Observation
1	Maîtrise du marché et de l'aspect marketing					
2	Maîtrise de l'aspect technique tout respectant les normes et qualités					
3	Maîtrise de l'aspect organisationnel avec des objectifs bien définis					
4	Maîtrise de l'aspect financier tout en minimisant les coûts et en maximisant les chiffres d'affaires/les profits					
5	Respect des délais					
6	Garantie suffisante					
7	Apports des promoteurs suffisants					
8	Maîtrise de l'environnement du projet					
9	Partenariat avec d'autres entités bien fondé					
10	Viabilité/Efficacité/Efficience du projet					
11	Respect de toutes les directives tant sur la forme que sur le fonds					
12	Justification de l'utilisation des crédits demandés					
13	Rentabilité du projet et capacité de remboursement d'emprunt					
14	Autres (à préciser) :					

6. Questions diverses

N°	Questions	Oui	Non	Observation
1	Le budget accordé est-il différent par rapport à la requête initiale ?			
2	Avez-vous eu recours à un quelconque parrainage ?			
3	Le bailleur a-t-il examiné une version préliminaire de la proposition ?			
4	Le bailleur de fonds a-t-il effectué une visite de terrain avant de prendre sa décision au sujet du financement de votre projet ?			
5	Si oui, renseignez-vous sur le déroulement de cette visite ?			

7. Qui seront les autres anciens bénéficiaires pouvant répondre à nos questionnaires ?

N°	Anciens bénéficiaires	Personne(s) à contacter	Adresse/Téléphone
1			
2			
3			
4			
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6			
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9			
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Module3 : Questionnaire pour les Anciens évaluateurs

1. Selon vous, comment avez-vous été choisi en tant qu'évaluateur ?

		Oui	Non	Peut être	Classer les 3 plus importants	Observation
1	Expériences professionnelles dans le domaine					
2	Formation appropriée dans le domaine					
3	Jeune					
4	Personne âgée					
5	Homme					
6	Femme					
7	Autres (à préciser) :					

2. Quels sont les principes d'évaluations ?

		Oui	Non	Observation
1	Évaluation par correspondance			
2	Évaluation par groupe d'experts			
3	Examens des projets au siège			
4	Examens des projets ailleurs			
5	Travail individuel			
6	Autres (à préciser) :			

3. Quels sont les types d'évaluation adoptés ?

		Oui	Non	Observation
1	Système de points			
2	Grilles multicritères			
3	Tableau d'analyse (ex : avantage et inconvénients			
4	Lancement d'idées ou Brainstorming (Remue-méninges)			
5	Méthode FARE (Faisabilité, Acceptabilité, Réalisable et Efficacité)			
	Logiciels spécifiques			
6	Autres (à préciser) :			

4. Quels sont, selon vous, les points qui méritent une attention particulière afin de réduire les risques des projets que vous examinez ?

1	Critères	Oui	Non	Peut-être	Classer les 5 plus importants	Observation
2	Maîtrise du marché et de l'aspect marketing					
3	Maîtrise de l'aspect technique tout respectant les normes et qualités					
4	Maîtrise de l'aspect organisationnel avec des objectifs bien définis					
5	Maîtrise de l'aspect financier tout en minimisant les coûts et en maximisant les chiffres d'affaires/les profits					
6	Respect des délais					
7	Garantie suffisante					
8	Apports des promoteurs suffisants					
9	Maîtrise de l'environnement du projet					
10	Partenariat avec d'autres entités bien fondé					
11	Viabilité/Efficacité/Efficience du projet					
12	Respect de toutes les directives tant sur la forme que sur le fonds					
13	Justification de l'utilisation des crédits demandés					
14	Rentabilité du projet et capacité de remboursement d'emprunt					
15	Autres (à préciser) :					

5. Qui seront les autres anciens évaluateurs pouvant répondre à nos questionnaires ?

	Anciens évaluateurs	Personne(s) à contacter	Adresse/Téléphone
1			
2			
3			
4			
5			
6			
7			
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ARTICLE SCIENTIFIQUE N°9

THE IMPACT OF INTERNAL MARKETING ON SERVICE QUALITY, PERCEIVED VALUE, CONSUMER SATISFACTION AND LOYALTY IN THE SERVICE SECTOR

Résumé l'article n°9 :

L'IMPACT DU MARKETING INTERNE SUR LA QUALITE DU SERVICE, LA VALEUR PERÇUE, LA SATISFACTION DES CONSOMMATEURS ET LA FIDELITE DANS LE SECTEUR DES SERVICES

Cet article propose d'intégrer le marketing interne, la qualité perçue, la valeur perçue, la satisfaction et l'intention comportementale dans un même modèle. L'étude a été menée auprès de 200 personnels de santé et 200 patients. Premièrement, les résultats indiquent l'influence des dimensions marketing internes sur la qualité perçue et la satisfaction. Dans un second temps, il s'avère que la qualité perçue influe sur la satisfaction et la valeur perçue, ce qui à son tour impacte la satisfaction. Enfin, il existe une relation entre, d'une part, la satisfaction et l'intention comportementale et, d'autre part, la valeur perçue et l'intention comportementale des consommateurs.

Mots clés:

Marketing interne, qualité perçue, confiance, satisfaction, intention comportementale.

Certificat de publication de l'article n°9:

The Impact of Internal Marketing on Service Quality, Perceived Value, Consumer Satisfaction and Loyalty in the Service Sector

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ABSTRACT: This article proposes to integrate internal marketing, perceived quality, perceived value, satisfaction and behavioural intention in the same model. The study was conducted with 200 healthcare staff and 200 patients. First, the results indicate the influence of internal marketing dimensions on perceived quality and satisfaction. In a second step, it turns out that perceived quality influences satisfaction and perceived value, which in turn impacts satisfaction. Finally, there is a relationship between, on the one hand, satisfaction and behavioural intention and, on the other hand, the perceived value and behavioural intention of consumers.

KEYWORDS: Internal marketing, perceived quality, trust, satisfaction, behavioural intention.

I. INTRODUCTION

One of the goals of marketing is to satisfy consumers. Indeed, for the latter, the value of a product lies in its ability to satisfy their needs. Whether it is for manufactured goods or services, consumer needs are satisfied by various attributes of the offer. However, given the simultaneous nature of the production and consumption of services, combined with relatively closer contact with consumers, it can be said that the marketing and management of services has a unique and particular character.

Indeed, in the service sector, the interaction between the employee and the customer is crucial for the experimentation of the service offer [1]. From this perspective, contact employees play an important role in customer satisfaction. It is attested that the quality of service, the efficiency of distribution, the efficiency of communication depend directly on contact employees. Thus, greater attention to employee-customer interactions can result in improved perceptions of service quality, customer satisfaction and the purchase intent of service customers.

Highlighting the importance and involvement of employees in the marketing of services refers to internal marketing. Indeed, internal marketing is a management philosophy and a set of activities that consider employees as internal customers and jobs as internal products. It then strives to offer internal products to satisfy the needs and desires of internal customers, while meeting the organization's objectives [2]. From this perspective, internal marketing has as its main objective the development of customer-oriented staff, and focuses primarily on employee development by emphasizing the importance of recognizing their contribution.

Perceived value is undoubtedly one of the key marketing themes. Its importance is recognized both in the business world and in the academic world. In the business world, perceived value is a source of competitive advantage and profit because it is linked to marketing variables such as satisfaction [3]. Moreover, it is strongly linked to consumers' purchasing intentions. In the academic world, the abundance of research testifies to the importance of the subject.

Although perceived value and internal marketing are recognized as important in explaining consumer satisfaction, no research attempts to integrate these two concepts into a single model. Thus, the objective of this research is to combine perceived value, perceived quality and internal marketing in a single model to explain consumer satisfaction and behavioural intent in the context of services. On the theoretical level, the aim is to compensate for the relative shortcomings revealed in the current literature. A deepening of the too few if not almost non-existent studies around a satisfaction model integrating at the same time perceived value, quality and internal marketing is necessary. Moreover, in the healthcare industry, despite the potential importance of the concept, it is largely neglected in the strategic considerations of healthcare providers. Methodologically, it is interesting to investigate in other fields as well as other cultures to improve the validity of research around these constructs.

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This article is organized in five parts. After a review of the literature on internal marketing, value, quality, satisfaction and intent, we present the conceptual research model and the hypotheses that arise from it. We then present the methodology and results discussed in the last part.

II. LITERATURE REVIEW

After an overview on the concept of internal marketing, perceived value and quality, this part deals with the concept of satisfaction. The concept of behavioural intention is dealt with at the end of the section.

A. Internal marketing

The concept of internal marketing originated in the 1970s [4]. Since then, the concept has become more and more important in research and is increasingly adopted and exploited within companies. From an internal marketing perspective, organizations need to view their employees as internal consumers [4]. According to this principle, internal marketing is more important than conventional external marketing [5]. In this sense, it must precede external marketing as the key to service excellence and successful external marketing [6].

Indeed, in service companies, front-line employees are essential to the success of organizations because they are in direct contact with external clients. As a result, they have a significant impact on the quality of service provided and customer satisfaction [7]. The growing recognition of the importance of the role of employees in the service industry has led service organizations to adopt internal marketing [7]. In order to encourage employees to provide excellent service to the external customer, organizations must treat employees as internal customers and thereby satisfy their needs. In this sense, internal marketing can be used to change employees' attitudes and behaviours. In addition, it can improve organizational commitment, task participation, motivation, and job satisfaction of employees [4].

In the literature, there is no consensus definition of internal marketing, sometimes it is defined as a philosophy, sometimes as a method, and sometimes as a process. From the first perspective, [2] define it as a management philosophy and set of activities that consider employees as internal customers and jobs as internal products. Internal marketing strives to offer internal products to satisfy the needs and desires of internal customers, while meeting the goals of the organization. According to the second perspective, it is a method that organizations successfully use to hire, retain, and motivate employees to provide better service to customers [6]. It is defined as the process of attracting, developing, motivating, and retaining skilled employees through internal (job-related) products that meet their needs [8].

Like its definition, there is no consensus on the dimensions that make up internal marketing. While Tansuhaj et al. [2] support a five-dimensional concept: recruitment, training, motivation, communication and employee retention, Huang et al. [4] advance three dimensions: internal communication, training and internal market research. Other conceptions of internal communication include a two-dimensional concept that integrates formal and informal internal communication [9].

B. Perceived quality

Perceived quality has always been at the center of marketing research, both in the corporate and academic worlds. In the business world, it is recognized as important in the commercial success of the company and in the search for competitive advantage. In fact, it has an impact on the costs and financial performance of the company. Particularly, in healthcare services, patients' perception of the quality of services is a key determinant of the provider's success because of its main role in patient satisfaction [3]. As far as the academic world is concerned, perceived quality is one of the themes most mobilized by marketing researchers in recent years.

Despite the importance of quality in the marketing literature, it is difficult to find a universal definition of the concept. For some, it is defined as the customer's perception of the overall quality or superiority of a product or service in relation to its intended use, in comparison with the alternatives available. While for others, it refers to an overall evaluation of the service that results from a comparison between, on the one hand, customers' expectations regarding service performance in general and, on the other hand, the evaluation of this performance for a particular service developed by a given company [10]. Nevertheless, an analysis of all these definitions brings out the idea of a confrontation between a prior expectation of the consumer and his impressions of a service. Thus, if the quality of the service provided exceeds expectations, the perceived quality is high, on the other hand, if it is below expectations, the perceived quality is low.

C. Satisfaction

For many years, satisfaction has been a key marketing concept for both the business and academic worlds. In the corporate world, it is part of a strategic perspective because it is strongly linked to post-purchase consumer behaviors such as loyalty [11]. In particular, in the context of healthcare services, patient satisfaction could be manifested through positive word-of-mouth and have a positive impact on the financial results of the institution [3]. In addition, it influences the outcome of medical practices [12]. For these reasons, patient satisfaction measurement is an integral part of the strategic processes of healthcare

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organizations [3]. In the academic world, its importance is evidenced by the increasing number of investigations on the subject over the years.

The literature puts forward two different conceptions of satisfaction: one refers to a specific transaction and the other to an overall assessment [1], [13]. According to the first perspective, it is defined as a judgment following a specific transaction. In this sense, it is inherent to the most recent transaction. On the other hand, it is an evaluation or experience in reaction to a particular transaction with a product, episode or service. According to the second idea, it is an evaluation based on all purchases and consumption experiences of a product or service. In this sense, it is an addition of all the satisfactions felt at the end of all the services received. This cumulative perspective is more interesting than a transactional perspective for assessing subsequent consumer behaviour.

D. Perceived value

Driven by ever more demanding consumers, ever more intense competition and ever more rapid technological change, companies are constantly trying to find new strategies to gain and maintain a competitive advantage. On the other hand, consumers, on the one hand, seem to be more and more rational, and on the other hand, they are now faced with a multitude of choices. In this new context, the concept of the customer-focused, value-adding company in relation to the competition finds all its relevance. The introduction of perceived value into the company's strategy makes this customer-oriented approach effective. Indeed, the value perceived by the customers is the basis for comparison and selection between the offers on the market.

Although the importance of customer value is recognized in the literature, investigations around the concept are fragmented and definitions of value diverge. On the one hand, it is defined as an overall assessment made by the consumer of the usefulness of a product between what is received and what is due [14]. On the other hand, it refers to the difference in value perceived by customers between the quality or benefits of the product/service and the sacrifice made in paying the price. According to yet other ideas, it refers to an emotional bond established between a customer and a producer after the customer has experienced a product or service produced by a provider. Despite these different conceptions of value, there is some consensus: first, perceived value is not objectively determined by providers or other stakeholders, but refers to what the client perceives. Second, value perception processes generally involve a trade-off between what clients receive, such as quality, benefits, and public services, and what they sacrifice, such as price, opportunity cost, maintenance, and training costs.

E. Behavioural intention

Behavioural intention refers to people's beliefs about what they intend to do in a certain situation [15]. Behavioural intention is conceptualized as a proxy indicator for actual behaviour. On this basis, according to the theory of reasoned action [15], attitude (i.e., an individual's positive or negative assessment of a consumption experience) influences the intention to perform an activity, which in turn determines actual behaviour.

From this perspective, certain behaviours indicate a customer's attachment to a business. These specific indicators of favourable behavioural intentions are manifested by saying positive things about the business, recommending it to others, and remaining loyal to it. Conversely, unfavourable aspects of behaviour are manifested by complaining, turning to competing firms, or decreasing the volume traded with the firm in question [16].

III. RESEARCH MODELING AND HYPOTHESIS

Empirical investigations confirm a positive relationship between internal marketing and consumer satisfaction [2] and between internal marketing and service quality [17]. Indeed, internal marketing acts in a positive way with employees who, in turn, will make the necessary efforts to meet consumer needs. For the purposes of this research, internal marketing refers to service training programs, performance bonuses, and a vision of service excellence [6]. These ideas are based on the following assumptions:

H1a: Service training programs positively influence service quality.
H2a: Performance incentives are positively related to service quality.
H3a: The vision of service excellence positively influences service quality.
H1b: Service training programs positively influence customer satisfaction.
H2b: Performance incentives are positively linked to customer satisfaction.
H3b: The vision of service excellence positively influences customer satisfaction.

Although the link between perceived quality and satisfaction has been the subject of numerous investigations, a question remains unresolved as to the place of both in the link. Perceived quality is sometimes presented as an antecedent to satisfaction, and sometimes it results from satisfaction [11]. In the present research, we align ourselves with the idea that quality is an antecedent to satisfaction [18]. Hence the following hypothesis:

H4: Quality positively influences satisfaction.

Value is at the heart of what consumers look for in an exchange [19]. Although there is no consensual definition of value, it can be understood as the consumer's subjective perception of the value of an activity or object, taking into account the benefits

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and costs related to consumption [19]. According to this perspective, a high level of quality is not a precondition for value because a reduction in quality can be compensated for by lower costs. However, our ideas are consistent with previous investigations that point to a positive relationship between perceived quality and perceived value [18]. These ideas support the following hypothesis:

H5: Perceived quality positively influences perceived value.

In addition to the link between perceived quality and satisfaction, perceived value is considered a determinant of satisfaction [3], [18]. Indeed, the two main determinants of satisfaction are perceived value and quality [3], [18]. This leads to the following hypothesis:

H6: Perceived value positively influences satisfaction.

Satisfaction can reinforce the customer's decision to re-experience a particular service. From this perspective, the more satisfied the customer is, the higher the intention to buy back and recommend the service to the provider. Moreover, empirical investigations confirm the link between satisfaction and the consumer' behavioural intention [18]. Hence the formulation of the following hypothesis:

H7: Satisfaction positively influences the consumer's behavioural intention.

As well as the link between satisfaction and behavioural intention, there also seems to be a link between perceived value and the consumer's behavioural intention [20]. This leads to the following hypothesis:

H8: Perceived value positively influences the consumer's behavioural intention.

The overall research model is as follows:
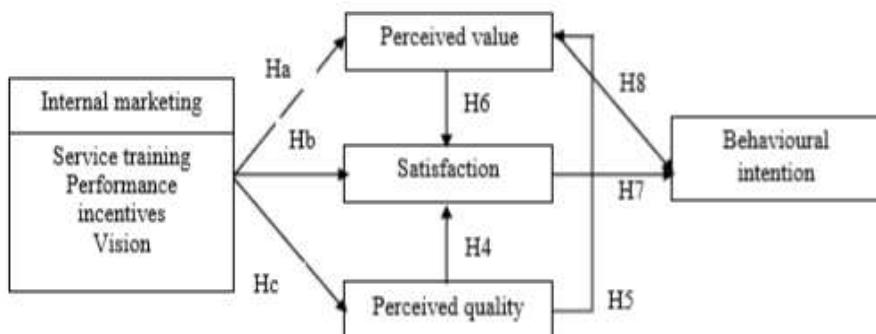
Figure 1. The global research model

IV. METHODOLOGY

This part presents the measuring instruments for each of the constructions. Sampling and data collection, as well as the method of analysis are presented.

A. Measures

The measurement scales used are all taken from the literature. We have adapted them according to the context of the study. The items for internal marketing are initiated by Tsai and Tang [6],. Quality measurement is adapted from Wu [21], perceived value, satisfaction and behavioural intention are inspired by the work of [3]. Table 1 illustrates the different definitions used for each construct.

B. Subjects and procedure

Prior to data collection, the questionnaire was pre-tested with 10 caregivers and 10 patients. The final version of the questionnaires was then administered face-to-face. The questionnaire on internal marketing was distributed to 200 health workers (doctors and nurses) in public and private hospitals in Madagascar. The questionnaire on perceived quality, perceived value and satisfaction was distributed to 200 patients. According to Janssens et al. [22], to ensure the reliability of a structural equation model, the number of responses must be 5 to 10 times higher than the number of items. In this research, the scale with the highest number of items is the scale relating to the training program. The minimum number required to validate the scale is at least 35 responses, i.e. 5 times the 7 items. Loehlin [23], for his part, puts forward the idea of a sample of 100 to 200 individuals, and concludes that the model behaves correctly if the sample size meets this condition. Given these methodological recommendations, the difficulties related to both the survey and the availability of individuals to be questioned, and the length of our questionnaire, we interviewed 200 individuals.

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Table 1. Constructs definitions

Constructs	Definition	References
Internal marketing	Refers to three dimensions: service training programs, performance incentives and the vision of service excellence.	Tsai et Tang [6]
Perceived quality	Comparison of customer expectations with their perception of actual service performance	Wu [21]
Perceived value	The overall assessment by the patient in relation to the perception of what is received and what is given.	Choi et al. [3]
Satisfaction	The consumer's response to the evaluation of the gap between previous expectations and the actual performance of the product as perceived after consumption.	Choi et al. [3]
Behavioral intention	Refers to willingness to recommend, intention to redeem and positive word-of-mouth.	Choi et al. [3]

C. Statistical analysis

The data obtained are processed with SmartPLS 3 software. First, the measurement scale was tested, then a modeling under structural equation allowed to test the hypotheses put forward.

V. RESULT

After presenting the reliability and validity tests of the measurement scales, this section discusses the results of the structural model test.

A. Measurement model

Before testing the structural model, the reliability, convergent and discriminant validity of the constructs must be established.

Table 2. Scales measurement

Construct/measurement	λ	Fiability	AVE
Service training programmes			
We prepare to perform well.	0.731		
Our organization views the development of knowledge and skills in employees as an investment rather than a cost.	0.821		
Skill and knowledge development of employees happens as an ongoing process in our hospital.	0.789		
The hospital teaches us why we should do things and not just how we should do things.	0.725	0.907	0.584
The organization goes beyond training and educates employees as well.	0.795		
In this organization, we are properly trained to perform our service roles.	0.716		
This organization has the flexibility to accommodate the differing needs of employees.	0.766		
Performance incentives			
Our performance measurement and reward systems encourage employees to work together	0.945		
We measure and reward employee performance that contributes to our organization's vision.	0.938	0.963	0.896
In our organization, employees who provide excellence service are rewarded for their efforts.	0.957		
Vision about excellence service			
Our organization offers us a vision that we can believe in.	0.862		
Managers communicate our organization's vision well to us.	0.912	0.943	0.735
The organization uses the data which it gathers from employees to	0.714		

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improve our jobs, and to develop the strategy of the organization.			
Our organization communicates to employees the importance of their service roles.	0.854		
The organization places considerable emphasis on communicating with us.	0.855		
Qualité perçue			
Physical facilities, equipment and appearance of personnel (Tangible)	0.923		
Ability to deliver the promised service confidently and accurately (Responsiveness)	0.851		
Good will to respond to consumers and offer prompt service (Reliability)	0.863	0.948	0.785
Competent and courteous employees and their ability to inspire confidence (Assurance)	0.930		
Consideration, individualized attention that the company gives to its consumers (Empathy)	0.862		
Valeur perçue			
The amount of money I paid for the care was appropriate.	0.973		
The quality of the medical service I received was worth more than what I paid.	0.975	0.974	0.949
Satisfaction			
How satisfied were you with the treatment you received in the hospital?	0.958	0.955	0.915
How satisfied were you with your decision to use the hospital?	0.955		
Behavioural intentions			
I will recommend that other people use this hospital.	0.933		
If I needed medical services in the future, I would consider this hospital as my first choice.	0.923	0.944	0.949
I will tell other people good things about this hospital.	0.907		

The reliability test gave results greater than 0.7 (between 0.714 and 0.975), an acceptable threshold according to Nunnally and Bernstein [24], which confirms the reliability of the measurement scales used [25]. Concerning the validity test, Bagozzi and Yi [26] suggest that convergent validity is ensured by λ above 0.7. Table 2 shows that all of the λ are above their recommendations. Furthermore, the mean extracted variances (AVE) are greater than 0.5, which makes it possible to establish the convergent validity of the constructs [25]. With regard to discriminant validity, it is established when the square root of the mean extracted variance (AVE) is greater than each of the correlations between constructs [25]. The results in Table 3 show that the conditions for discriminant validity are met.

Table 3. Discriminant validity test

	1	2	3	5	5	6	7
Training program	0.764						
Performance	0.695	0.947					
Behavioral intention	0.699	0.721	0.921				
Quality	0.709	0.674	0.697	0.886			
Satisfaction	0.618	0.636	0.855	0.714	0.956		
Perceived value	0.578	0.634	0.792	0.706	0.809	0.974	
Vison	0.609	0.605	0.704	0.783	0.644	0.637	0.857

B. Structural model

To evaluate the structural model, the coefficient of determination (R2) of each dependent variable, the structural coefficients (β) and the level of significance (t-value) were examined. The values of R2 are above the recommended threshold of 0.10 (between 0.504 and 0.731) [27].

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Table 4. Result of Structural Equation Model Estimates

Path	Hypothesis	Structural coef	t-Value	p-value	Decision
Training -> Quality	H1a	0.545	8.322	0.000	Accepted
Performance -> Quality	H2a	0.449	7.960	0.000	Accepted
Vison -> Quality	H3a	0.659	10.685	0.000	Accepted
Training -> Satisfaction	H1b	0.229	3.120	0.002	Accepted
Performance-> Satisfaction	H2b	0.316	5.149	0.000	Accepted
Vison -> Satisfaction	H3b	0.173	2.521	0.012	Accepted
Quality -> Satisfaction	H4	0.413	4.692	0.000	Accepted
Quality -> Value	H5	0.372	4.179	0.000	Accepted
Value -> Satisfaction	H6	0.491	5.456	0.000	Accepted
Satisfaction -> Intention	H7	0.855	42.311	0.000	Accepted
Value -> Intention	H8	0.372	4.495	0.000	Accepted

This study was initiated to examine the relationship between the dimensions of internal marketing, perceived quality, perceived value, satisfaction and intentions. The results in Table 4 show that all three dimensions of internal marketing positively impact perceived quality and satisfaction (β = 0.545, ρ <0.005; β = 0.449, ρ <0.005; β = 0.659, ρ <0.005; β = 0.229, ρ <0.005; β = 0.316, ρ <0.005; β = 0.173, ρ <0.05). Therefore, H1a, H2a, H3a, as well as H1b, H2b and H3b are confirmed. In addition, perceived quality has a positive impact on satisfaction (β = 0.413, ρ <0.005). As a result, H4 is confirmed. Similarly, perceived quality positively impacts perceived value (β = 0.372, ρ <0.005), which confirms H5. The same is true for the impact of perceived value on satisfaction (β = 0.491, ρ <0.005), therefore H6 is confirmed. Finally, satisfaction and perceived value have a positive impact on intention (β = 0.855, ρ <0.005; β = 0.372, ρ <0.005), therefore confirming H7 and H8.

VI. DISCUSSION

This study contributes to the current understanding of health care consumer behaviour in two ways. First, it allows us to test a model that integrates both internal marketing and perceived value in a satisfaction model. In fact, no study has attempted to integrate these variables in the same model. Second, our study satisfies the need to investigate these models in other cultures and health care systems.

First, the results show that the more the institution implements service training programs, the more clearly there is a clear vision of the services provided by the institution, the better the quality perceived by patients. Confirming other investigations [6], the results of this research imply that, first, internal marketing improves the knowledge and skills of health care staff to better respond to patient requests. Second, internal marketing increases nurses' willingness to provide high quality services by creating a vision of the service to be provided, thereby improving the quality of service provided by nurses.

Second, our results confirm the relationship between performance incentives and perceived quality. These results are contrary to what Tsai and Tang [6] found. One explanation is likely related to the socioeconomic context in which the study was conducted. Indeed, this research was conducted in Madagascar, one of the least developed countries. In this regard, given the high unemployment rate combined with difficult employment conditions, the various forms of incentives, especially financial ones, encourage people to work more.

Thirdly, the dimensions of internal marketing have a significant impact on patient satisfaction. These results confirm other ideas [7] that by meeting the needs of internal clients, i.e. the needs of the institution's staff, the institution improves its ability to meet the needs of external clients.

Fourth, the results reinforce the foundation of the causal sequence suggested by the multi-attribute attitude model: cognition (quality and value) - affect (satisfaction) - conation (behavioural intention).

First, perceived quality significantly impacts patient satisfaction. These results confirm other investigations attesting to the positive relationship between the two concepts [3]. In such situations, patients will opt for facilities with a high level of quality of care and service, which therefore seem to be the most able to satisfy their needs. Second, perceived value influences satisfaction. Thus, if the total value received is greater than the total sum of the sacrifices made by the patient, satisfaction is achieved. Otherwise, if the total value received is less than the sum of the sacrifices, there is dissatisfaction. Patients expect a certain level of service at the price they pay. Therefore, health care providers are encouraged to look for ways to reduce the perceived costs of monetary and non-monetary services and to increase perceived benefits to increase patient satisfaction. Furthermore, patient satisfaction has a significant relationship with patient behavioural intention. This finding is consistent with the results of previous studies in which satisfaction plays an important role in behavioural intentions [28]. In this sense, behavioural intention is based on a willingness to recommend the facility to others, a willingness to inform staff of the benefits of the hospital and a willingness to consider it as a first choice in the future.

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Finally, as well as satisfaction, perceived value also has a positive impact on consumers' behavioural intention. As a result, a study on a relational point of view between an institution and patients requires both satisfaction and perceived value to be taken into account. These two constructs are considered complementary. Indeed, satisfaction measures the level of what the provider currently offers on the market, as perceived by customers. It refers to a tactical level that provides indications to improve current products and services. On the other hand, perceived value refers to the future directions of the company. It refers to a strategic level. From this perspective, it aims to assess how to create value for customers, how to better meet customer needs and how to attract potential customers. On this basis, the results of our research confirm the importance of satisfaction in any marketing decision. As a result, the marketing system must not only integrate the measurement of satisfaction, but also of perceived value.

VII. MANAGERIALIMPLICATIONS

In addition to the theoretical impacts, our results also have implications for health care institutions. First, the service climate determines the behaviour of individuals by influencing their thinking and perceptions about certain aspects of their environment. As a result, the service climate relative to the organization can influence and regulate employees' attitudes and behaviours towards clients. In addition, internal marketing improves service quality through the service climate in question. Dimensions of internal marketing such as service training help to foster the service climate. From this perspective, an investment in staff training is necessary. Updates in job-related techniques are certainly essential, but also other training such as communication and emotion management in order to improve not only the quality of service offered to patients, but also the relationship between staff.

Secondly, the company's vision, especially the service excellence to which the company aspires, must be effectively communicated to all staff. This leads employees to have a coherent and collective vision of the company's strategic as well as operational direction. In addition, it is essential that employees are aware of what they can do to contribute to the success of the organization. Thus, seminars, annual conferences, regular meetings between managers and employees must be set up.

Thirdly, it is essential that the company creates a work environment where employees feel motivated, leading them to focus more on customers. In order to achieve this, as a first step, systems are needed that motivate and contribute significantly to improving the organization's service quality. As well as surveys for consumers, not only for consumers, employees must also be surveyed for satisfaction on a regular basis. As a second step, staff rewards should be reviewed and modified based on the organization's performance. In addition, a reward system could be developed to encourage employees to share their ideas to improve the organization's operations. Rewards need not be purely financial; other forms of rewards may be more effective. Such actions can create an environment in which employees see tangible results from their efforts.

Fourth, it is recommended that the organization strive to implement staff suggestions wherever possible. In addition, as a result of staff surveys and suggestions, management should provide feedback on employee suggestions (within a suitable timeframe). By listening to its employees and acting on their ideas and suggestions, the organization makes them feel valued and improves their involvement and motivation.

Finally, regarding perceived quality; it is important to reassure patients that they will receive the desired level and quality of services when they are admitted to the facility. Providers should be attentive to the dimensions of perceived quality (tangibility, reliability, helpfulness, assurance, empathy).

First, the overall appearance of the hospital facilities and staff provides some tangible clues about the quality of services that patients can expect. One of the basic expectations of patients is probably the assurance of being in good hands. The sense of assurance is best conveyed by the skills, professionalism, commitment and efficiency of the staff. Thus, staff must demonstrate a high level of competence in every interaction and exchange with patients.

Patients also expect accurate responses at all stages of care. Staff need to be precise in their responses about diagnostic results, treatment procedures that the patient should follow, etc. Communication with patients requires special attention from health care facilities. Not only must there be open communication with patients, but also listening to them. Staff responsiveness is also required. Staff need to be more responsive and respond quickly to patients' needs. Indeed, there appears to be a relationship between waiting time and patient satisfaction [28].

Concerning helpfulness and empathy. A new type of relationship between caregiver and patient needs to be established. Apart from treating patients with courtesy, all dimensions of the person must be taken into consideration, but not only the patient aspect or the exclusively medical treatment of the disease. Caring for the whole person includes not only physical treatment, but also emotional and psychological support from the caregivers. In this respect, beyond the perceived quality aspect, an empathetic demonstration of care by the caregivers influences the outcome of the treatment in question [12]. In this respect, empathy is manifested by taking into account patients' lifestyles in the treatment plan in order to personalize and individualize care.

VIII. CONCLUSION: LIMITATION AND FUTURE RESEARCH DIRECTIONS

One of the limits of research undoubtedly comes from our conception of satisfaction, which is restricted to its cognitive dimension. It would be just as interesting to investigate the emotional dimension of the construct. On the other hand, we have

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limited ourselves to the functional component of perceived value. However, perceived value is also presented as a unifying concept, integrating both a functional and an emotional component. Future investigations should integrate this other dimension of perceived value.

In this perspective, it would be interesting to integrate emotional work into models of satisfaction and perceived quality. Emotional work refers to the regulation of emotions or the process of managing expressions and emotions. Indeed, emotional work not only impacts patient satisfaction, but also improves the work environment for healthcare staff [12].

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ARTICLE SCIENTIFIQUE N°10

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THE MODERATING EFFECT OF EQUITY ON THE LINKS BETWEEN PERCEIVED EXPECTATIONS, QUALITY OF SERVICE, EMOTIONS, SATISFACTION AND LOYALTY: CASE OF RESTAURANTS

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Résumé l'article n°10 :

L'EFFET MODÉRATEUR DE L'ÉQUITÉ SUR LES LIENS ENTRE LES ATTENTES PERÇUES, LA QUALITÉ DE SERVICE, LES ÉMOTIONS, LA SATISFACTION ET LA FIDÉLITÉ: CAS DES RESTAURANTS

Cet article est axé sur les conséquences des attentes perçues sur la qualité, la satisfaction, l'émotion et la fidélité dans la restauration. Après une clarification des notions d'attente perçue, de qualité de service, d'émotion de satisfaction, de fidélité et d'équité par rapport à l'attente, nous proposons un modèle de recherche. Ce modèle repose sur l'hypothèse que dans le cadre de la restauration, l'attente perçue a un impact sur la qualité perçue, l'émotion, la satisfaction et la fidélité. De plus, l'équité vis-à-vis des attentes modère les relations entre ces variables. Les données d'une enquête auprès de 400 clients de la restauration de la ville d'Antananarivo ont été traitées à l'aide d'équations structurelles. Les résultats confirment en partie nos hypothèses, en particulier l'influence de l'attente perçue sur la qualité, les émotions et la satisfaction. Nous concluons notre article sur les limites de l'étude et les perspectives de recherches futures.

Mots clés : Temps d'attente perçus, qualité perçue, émotions, justice de l'attente, satisfaction, fidélité, restaurant

Certificat de publication de l'article n°10:

The Moderating Effect of Equity on the Links between Perceived Expectations, Quality of Service, Emotions, Satisfaction and Loyalty: Case of Restaurants

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ABSTRACT:This article focuses on the consequences of perceived expectations on quality, satisfaction, emotion and loyalty in the restaurant industry. After a clarification of the concepts of perceived expectation, service quality, emotion of satisfaction, loyalty and fairness in relation to expectation, we propose a research model. This model is based on the hypothesis that in the context of catering, perceived waiting has an impact on perceived quality, emotion, satisfaction and loyalty. Moreover, fairness with respect to expectation moderates the relationships between these variables. Data from a survey of 400 restaurant customers in the city of Antananarivo were processed using structural equations. The results partly confirm our hypotheses, in particular the influence of perceived waiting on quality, emotions and satisfaction. We conclude our article on the limitations of the study and the prospects for future research.

KEYWORDS:Perceived waiting times, perceived quality, emotions, justice of wait, satisfaction, loyalty, restaurant

I. INTRODUCTION

Madagascar is said to be the "country of moramora". The country bears its name well because whatever we do, whatever we want, wherever we want to go, we will have to be patient. In everyday life, Malagasy people go there "despacito", and human relations also respond to the principle of moramora. Associated with the principle of "fotoangasy" or "the Malagasy time", it seems that there is another notion of time for the Malagasy and the services of the restoration do not escape this rule.

In the food service industry, waiting time for service is usually the first direct interaction between customers and most delivery processes. Indeed, investigations in the food service industry conclude that waiting time is a major customer concern [1]. Researchers have argued that service delays can be controlled by two techniques: operations management or perception management [2]. Thus, the limitations of operations management with respect to waiting time is inherent in the restaurant's limitation of not being able to predict demand with certainty. This limitation intuitively leads to a growing interest in managing perceptions of the waiting experience. To do this, it is important to understand the variables that influence perceptions of waiting and the possible impact of waiting on service evaluations. Despite this inevitable reality, empirical investigations in this area are limited and there is little research examining how organizations might reduce the negative effects of waiting. Thus, this paper responds to this call for research.

From other perspectives, although perceived waiting time, quality of service, emotion and fairness are important in shaping satisfaction, it is rare to see all three concepts simultaneously in the same model and furthermore, this relationship has not yet been empirically tested in the context of catering. Furthermore, the moderating role of equity has not yet been fully studied in the literature. The objective of the present research is to combine perceived expectation, perceived quality, fairness and emotions in the same model in order to explain consumer satisfaction and behavioral intention in the context of catering. On the theoretical level, our study makes several essential contributions to the literature. Firstly, we empirically validate the notion that expectation leads to negative emotions and, moreover, has an

impact on service quality, consumer satisfaction and loyalty. Second, we analyse the moderating effect of equity on the effects of waiting time. A finding that there is too little research adopting this perspective leads us to take a closer look at the subject. Methodologically, more investigation in areas such as restaurants and other cultures is needed to establish the validity of the research.

The article begins with the conceptual background and the development of hypotheses. We then discuss the methods used and the results of hypothesis testing. Finally, we present a discussion of the management and research implications of the results, as well as an identification of the inherent limitations of the research.

II. CONCEPTUAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1 Waiting time

With income and price, time can be considered a constraint in consumers' purchasing choices [3]. Defined as the time from when a client is ready to receive service until the service begins [4], waiting time has four aspects: objective, subjective, cognitive, and affective [3]. Objective waiting time is the elapsed time, measured by a stopwatch, before service is consumed (before being served, before being received, etc.). Subjective waiting time is the consumer's estimate of the waiting time. In the literature, the subjective aspect of waiting is measured using perceived waiting time [5]. The cognitive aspect of waiting refers to the assessment of waiting as acceptable, reasonable or tolerable [6]. Finally, the affective aspect of waiting is assimilated to the emotional reactions of waiting such as irritation, boredom, frustration, stress, pleasure, happiness, etc. [6]. Investigations have shown that individuals are poor at estimating the actual length of waiting time [5]. Furthermore, for consumers, perceived waiting time is more likely to be the source of consumer dissatisfaction than objectively measured waiting time [5]. Thus, this research focuses on perceived waiting time rather than actual waiting time.

Several investigations support the idea that waiting time is an important factor in customer satisfaction. In fact, perceived waiting time is inversely related to customer satisfaction. Thus, the less customers wait, the more satisfied they will be [7]. According to Oliver [8], satisfaction is above all an emotional variable. Therefore, according to the causal cognitive-affect ordering [9], cognitive evaluations such as wait times are antecedents to satisfaction.
H1: Perceived waiting time influences satisfaction.

Previous studies have shown that longer perceived waiting times have a negative effect on consumers' perceptions of the quality of services [10] and on their attitudes towards a service provider. In fact, service delay is thought to negatively influence several attributes, and thus the overall assessment of service [11]. This idea is supported by Berry and Parasuraman [12] who state that promptness or timeliness is an important element of service reliability, an important attribute in the overall assessment of service quality. Empirical investigations undertaken in the airline industry have supported the argument that waiting time has a negative influence on the overall assessment of service quality [4]. These ideas support the following hypothesis:

H2: Perceived waiting time influences perceived quality.

Consumers engage in a service transaction to achieve a certain result [9]. As a result, those who prevent them from achieving goals such as service expectations can create a sense of «desire-outcome-conflict" that can trigger negative emotional reactions to the situation [5]. Expectations lie between consumers and the achievement of desired goals and, as a result, often create a sense of frustration. According to other ideas, a client's waiting experience consists of a perceived waiting time and their emotional reaction to the wait, with emotional reactions being inherent to the wait itself. These ideas support the following hypothesis:
H3: Perceived waiting time influences negative emotions

2.2 Service quality

In the literature, the definition of quality proposed by Parasuraman, Zeithaml, and Berry [13] is widely used. From this perspective, quality of service refers to an overall assessment of the attributes of the product or service. Another definition proposed by Bitner [14] defines quality of service as the customers' general impression of the relative inferiority/superiority of a service provider and its services. As such, it is considered to be similar to the customer's general attitude toward the firm [13].

Although researchers admit that, like satisfaction, perceived quality mobilizes the paradigm of disconfirmation of expectations, the concept differs from satisfaction [14]. Perceived quality is a form of attitude related but not equivalent to satisfaction. In the literature, several ideas underline the difference between the two constructs. First, perceived quality is a long-term global assessment, whereas satisfaction is a transaction-specific measure. Second, there is some difference in the operationalization of disconfirmation. On this point, in the framework of quality of service, the

comparison is made on what the consumer should expect, whereas in the framework of satisfaction, the comparison is made on what the consumer should expect.

Bagozzi's [9] idea of the "result-desire" relationship can be used to explain the relationship between perceived quality and satisfaction. Indeed, individuals generally engage in activities (e.g., buying a product, a service) out of a desire to achieve certain results. If the individual assesses that the expected result is achieved, then the "desire-result" is achieved, which will subsequently be followed by an effective response (such as satisfaction) [9]. From this perspective, individuals engage in the activity of purchasing a service or good because they desire a certain level of quality in relation to those they purchase. Following an evaluation, if the required quality (result) is achieved, satisfaction will follow. These ideas form the basis of the hypothesis:

H4: Quality of service influences satisfaction

In addition, quality of service reinforces the propensity of customers to buy again, buy more, purchase other services, become less price sensitive and talk about their positive experiences. Empirical investigations have identified a positive relationship between perceived quality and loyalty [15]. Indeed, there is a relationship between service quality and purchase intention, recommendation and resistance to better alternatives. Following the idea that purchase intention, recommendation and resistance to better alternatives constitute loyalty, the following hypothesis is proposed.

H5: Quality of service influences loyalty

2.3 Emotions

The human being presents himself as the most emotional animal. Among other characteristics, emotion is presented as what makes humans unique [16]. It so happens that no other subject has aroused as much interest as emotion in the field of sociology. On this, the importance of the subject lies in the fact that emotions not only play a fundamental role in survival [17], but they also constitute the primary motivation system for the human being [18], and moreover communicate a signal of intentions [19]. Within the framework of consumer theory, affective is an important area for studying behavior.

Emotional theory postulates that environmental stimuli influence an individual's emotional state, which in turn affects his or her reactions [20]. In a restaurant setting, many stimuli can influence the emotional state of the customer. These stimuli can be tangible or intangible such as service aspects. According to other ideas, consumers engage in a service transaction to achieve a certain result [9], however, waiting creates psychological tension by blocking the rapid achievement of objectives. According to these ideas, the negative effect of the experience influences the consumer's evaluation of the overall service. The consumer's mood following the waiting experience influences his or her opinion of the overall service experience [10]. These ideas provide the basis for the following assumptions:

H6: Negative emotions impact perceptions of service quality.

H7: Negative emotions affect the perception of satisfaction.

2.4 Satisfaction

Satisfaction is a central concept in marketing and has therefore been the subject of numerous investigations over the years. In spite of a good number of writings on the subject, the authors have not found any consensual definition of the construct. The discrepancy is more about its apprehension in a temporal framework than about its very nature. From a temporal point of view, some authors support the idea that satisfaction refers to the most recent transaction where it is defined as an evaluation or experience in reaction to a particular transaction with a product, episode or service. Other authors define satisfaction as a cumulative evaluation of experiences with the product or service made by the consumer, or an addition of all perceived satisfactions. Despite these differences, customer satisfaction has long been recognized as a central concept and an essential objective of all business activities.

For companies operating in competitive markets such as food service, loyalty is inherent to survival. Loyalty increases profits by reducing the costs of acquiring new customers. In addition, loyal customers are less price-sensitive and are associated with lower operational costs due to their familiarity with company procedures [21]. Several studies show that there is a direct and strongly positive link between customer satisfaction and customer loyalty [3]. Customer satisfaction is recognized as an antecedent of customer loyalty. Indeed, satisfaction has a positive effect on attitudinal change in the period following the buyback [22] and these positive attitudes effectively reinforce buyback intentions. These ideas support the following hypothesis:

H8: Satisfaction impacts consumer loyalty.

2.5 Equity as a moderating variable

One aspect of perceptions of expectation concerns social or procedural justice [23]. Procedural justice concerns individual perceptions of procedural fairness and is distinct from distributive justice, which concerns fairness in the distribution of desired outcomes. According to investigations, perceived justice is described as a key variable in social analyses of expectation [24].

According to evaluation theory, consumers consciously assess threats to their goals and well-being [25]. In an expectation situation, when the expectation is perceived to be fair, the perceived threats to goals are not high for consumers, therefore, the consumption experience will not be negatively evaluated. On the other hand, if the expectation is perceived to be unfair, consumers evaluate this situation very negatively. Furthermore, according to social justice theory, when a long wait is associated with an unfair procedure, it increases consumer distress and therefore reinforces negative evaluations.

H9a: Perceived justice of the wait moderates the relationship between perceived waiting and satisfaction.

H9b: Perceived justice of the wait moderates the relationship between perceived quality and satisfaction.

H9c: Perceived justice of the wait moderates the relationship between perceived expectation and perceived quality.
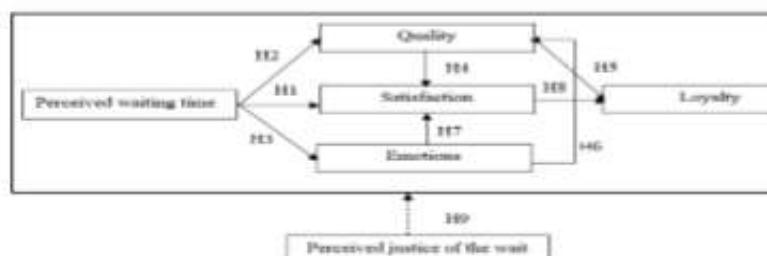
Fig. 1. The overall research model

III. RESEARCH METHODOLOGY

3.1 Measures

All of the measurement scales we have used are all taken from the literature. We have adapted them according to the context of the study. Perceived waiting time is adapted from the method used by Bielen and Demoulin [3]. On this basis, respondents were asked to classify their expectations into one of the following categories: less than 15 minutes, between 15 and 30 minutes, between 30 and 45 minutes, between 45 minutes and 1 hour and more than 1 hour. The measurement of emotions was inspired by Voorhees et al. [5]. Respondents indicated the intensity of their emotions after waiting. Satisfaction was captured according to Oliver's items [26]. Measures of perceived justice of wait are those initiated by Voorhees et al. [5]. The scale has a good psychometric property. The perception of service quality is that proposed by Jang and Namkung [20]. Finally, the measure of loyalty is adapted from the work of Zeithaml, Berry, and Parasuraman [27], and the scale is used in various service activities.

To ensure content validity, the questionnaire was refined through a rigorous pre-test, initiated to test the clarity of the questions. During the pre-test, 10 individuals were invited to comment on the questions and their wording. The comments of these 10 individuals formed the basis for the revision of our measurement scales.

3.2 Subjects and procedure

The research was conducted among consumers who made at least five purchases on Facebook in the same year. To ensure the reliability of the structural equation model, the number of responses must be 5 to 10 times greater than the number of items [28]. In this research, the scale with the highest number of items is the efficiency scale. The minimum number required to validate the scale is at least 25 responses, i.e. 5 times the 5 items. [29], for his part, puts forward the idea of a sample size of 100 to 200 individuals, and concludes that the model behaves correctly if the sample size meets this condition. Given these methodological recommendations, the difficulties related to the survey, the availability of individuals to question, and the length of our questionnaire, we conducted a face-to-face survey of 400 individuals.

3.3 Statistical analysis

The data obtained are processed with SmartPLS 3 software. First, the measurement scale was tested, then a modeling under structural equation was used to test the hypotheses put forward. These analyses allowed the following results to be obtained.

IV. RESULTS

4.1 Measurement model

Prior to testing the structural model, the reliability, convergent and discriminant validity of the constructs must be established.

TABLE 1. Scales of measurement

Scale	λ	Reliability	AVE
Emotions			
Irritated	0.989	0.989	0.978
Annoyed	0.989		
Perceived justice of the wait			
To what extent was there an appropriate procedure used to determine who was to be served next?	0.918	0.927	0.864
To what extent was the method of receiving service fair to people?	0.941		
Quality			
The restaurant serves my food exactly as I ordered it.	0.952		
Employees are always willing to help me	0.958	0.953	0.871
The behavior of employees instills confidence in me.	0.887		
Satisfaction			
I am satisfied with my decision to choose this restaurant.	0.845		
If I had it to do all over again, I would feel differently about my decision do choose this restaurant.	0.892		
My decision to choose this restaurant was a wise one.	0.904	0.948	0.786
I feel bad about my decision to choose this restaurant.	0.870		
I think that I did the right thing when I decided to choose this restaurant.	0.920		
Loyalty			
I will say positive things about this restaurant to other people.	0.969	0.969	0.940
I will encourage friends and relatives to do business with this restaurant.	0.970		

The reliability test gave results greater than 0.7 (between 0.845 and 0.989), an acceptable threshold according to Nunnally and Bernstein [30], which confirms the reliability of the measurement scales used [31]. Concerning the validity test, Bagozzi and Yi [32] suggest that convergent validity is ensured by the λ above 0.7. Table 2 shows that all of the λ are above their recommendations. Furthermore, the average variance extracted (AVE) are greater than 0.5, which establish the convergent validity of the constructs [31]. With regard to discriminant validity, it is established when the square root of the mean extracted variance (AVE) is greater than each of the correlations between constructs [31]. The results in Table 2 show that the conditions for discriminant validity are met.

TABLE 2. Correlation between the different constructs

	1	2	3	4	5	6
Waiting Times	1.000					
Emotions	0.493	0.989				
Perceived justice	-0.058	-0.040	0.930			
Loyalty	-0.637	-0.464	0.597	0.970		
Quality	-0.545	-0.494	0.740	0.872	0.933	
Satisfaction	-0.515	-0.470	0.663	0.923	0.821	0.886

4.2 Structural model

To evaluate the structural model, the coefficient of determination (R2) of each dependent variable, the structural coefficients (β) and the level of significance (t-value) were examined. The values of R2 are above the recommended threshold of 0.10 (between 0.243 and 0.891) [33].
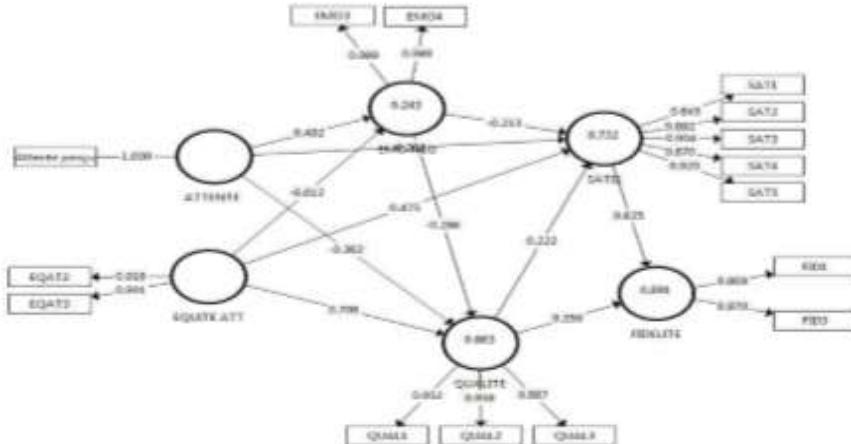
Fig. 2. The structural model

TABLE 2. Result of structural equation model estimates

Path	Hypothesis	Structural coefficient	t-value	p-value
Waiting times -> Emotions	H3	0.492	22.379	0.000
Waiting times -> Quality	H2	-0.347	16.583	0.000
Waiting times -> Satisfaction	H1	-0.128	3.004	0.003
Emotions -> Quality	H5	-0.288	13.969	0.000
Emotions -> Satisfaction	H6	-0.149	3.120	0.002
Waiting times (justice moderating effects) -> Satisfaction	H8a	0.598	14.120	0.000
Quality (justice moderating effects) -> Satisfaction	H8b	-0.046	1.120	0.263
Waiting times (justice moderating effects) -> Quality	H8c	-0.178	6.063	0.000

Quality -> Loyalty	H4	0.350	9.693	0.000
Quality -> Satisfaction	H3	0.701	6.444	0.000
Satisfaction -> Loyalty	H7	0.635	19.485	0.000

The objective of this section is to examine the causal relationships between perceived expectation, perceived quality, emotions, satisfaction and loyalty, and the moderating effect of equity versus expectation on these relationships. The results show that the perceived expectation inversely impacts satisfaction and perceived quality ($\beta = -0.128$, $p < 0.05$; $\beta = -0.347$, $p < 0.05$), therefore H1 and are confirmed. In addition, it positively impacts negative emotions ($\beta = 0.492$, $p < 0.05$), thus confirming H3. Concerning emotions, they impact in an inverse way the perceived quality and satisfaction ($\beta = -0.288$, $p < 0.05$; $\beta = -0.49$, $p < 0.05$). As a result, H5 and H6 are confirmed. Concerning the perceived quality, it has a positive impact on satisfaction and loyalty ($\beta = 0.701$, $p < 0.05$; $\beta = 0.305$, $p < 0.05$).

As a result, H3 and H4 are confirmed. The same applies to the relationship between satisfaction and loyalty ($\beta = 0.635$, $p < 0.05$), which confirms H7. Concerning the moderating effect of fairness in relation to expectation, if the latter moderates the relationship between: on the one hand, perceived expectation and satisfaction, and on the other hand, perceived expectation and perceived quality, it does not moderate the relationship between perceived quality and satisfaction. Therefore, if H8a and H8c are confirmed, it is not the cad of H8b.

V. DISCUSSION

This study contributes to the literature in several ways. Firstly, it makes it possible to test a model that integrates perceived expectation, perceived quality and emotion in consumer satisfaction and loyalty. Second, it allows us to test the moderating role of equity in relation to expectation in these relationships.

First, the results indicate that perceived expectation influences both emotion, perceived quality and satisfaction. The link between perceived expectation, perceived quality and satisfaction confirms previous investigations [34], [35]. According to field theory, the objective of individual motivation is the achievement of the goal. A queue creates psychological tension by blocking the rapid attainment of the goal. The negative effect of the experience influences the consumer's evaluation of the overall service. Concerning the link between perceived waiting and emotions, it is confirmed that feelings of annoyance, irritation are often the result of delays. Indeed, delays are obstacles to service, and when an obstacle blocks the satisfaction of a need, frustration and anger result. Referring to field theory, a certain blockage to the goal creates a negative effect that leads to anger and frustration [10].

Second, the results of our research stipulate the impact of emotions on both perceived quality and satisfaction. The relationship between negative emotions and satisfaction confirms the ideas put forward by other investigations [36]indeed, positive and negative emotions influence satisfaction in a positive and negative sense respectively. According to the attribution theory, when the individual faces negative experiences, negative emotions are apprehended according to the agent, or who is responsible for causing an unpleasant event. When the agent himself or herself is deemed responsible, emotions such as guilt arise. When responsibility is inherent in others, anger and other negative emotions arise. Consumers use their momentary moods as a heuristic to infer their level of satisfaction with life in general. The relationship between satisfaction and negative emotions depends on the cause of the negative emotion. Thus, if the negative emotion is caused by the provider, the negative emotions influence satisfaction in the opposite way.

Negative emotions affect the perception of quality. It has been confirmed that the perceived length of an expectation is strongly related to a negative effect (negative emotions), which in turn has a negative impact on evaluations of service quality [10]. From the perspective of field theory, a queue creates psychological tension. As a result, the consumer's mood following the waiting experience colors his or her opinion of the overall service experience.

Third, perceived quality impacts both satisfaction and loyalty. Although the link between perceived quality and satisfaction is recognized in the literature, there is some controversy about the link. Indeed, the first idea is that incidents of satisfaction lead to a perception of service quality [13]. The other view is that perceived service quality is an antecedent of customer satisfaction [37]. Our results support the idea that perceived quality positively influences satisfaction. According to Zeithaml[38], perceived quality is defined as a consumer's assessment of the excellence or superiority of a product. On this basis, it represents the characteristics of the product that meet the customer's requirements and best satisfy his or her wishes. The idea of satisfaction resulting from the confirmation of expectations supports the idea that perceived quality would be an antecedent of satisfaction. Indeed, satisfaction can be seen as an emotional response from a cognitive perspective following the quality of the service or product. Moreover, it is also confirmed that in the restaurant industry,

perceived quality positively influences consumers' behavioral intention. Indeed, according to Dick and Basu [39], relative attitude (comparative evaluation) is likely to provide a stronger indication of the repetition of a purchasing behavior. Fourth, satisfaction has a positive impact on loyalty. Many researchers have provided empirical evidence of a positive relationship between client satisfaction and loyalty [37], [40]. According to these ideas, improving satisfaction levels contributes to customer loyalty in terms of the probability of redemption and price tolerance in the event of redemption. Furthermore, Cronin and Taylor [37] states that satisfaction is a key determinant of positive behavioral intentions.

Finally, the results of our investigations indicate that fairness with respect to expectation moderates the relationship between perceived expectation and perceived quality. The results reveal that, on the one hand, fair waiting procedures directly influence evaluations of the service experience, but on the other hand, they can also reduce the negative effects of waiting. On the other hand, fairness with respect to waiting does not moderate the relationship between perceived expectation and satisfaction. Defined as a dual concept, satisfaction also includes an affective dimension. On this point, fairness in relation to expectation moderates the relationship between perceived expectation and the perception of quality, which is a purely cognitive concept. Moreover, it does not moderate the affective feeling in relation to the consequences of the perceived expectation.

5.1 Managerial and strategic implications

In addition to the theoretical impacts, our results also have implications for managers operating in the restaurant industry. Firstly, knowing reasonable customer expectations is important for improving quality perception and customer satisfaction in the food service industry. Wait time management is of real importance for service evaluation. With this in mind, if restaurants are having difficulty reducing wait times, they could build on other elements to make the wait more pleasant. In fact, wait measurement is associated with the waiting environment that minimizes perceived waiting. Examples include distractions such as newspapers or access to Wi-Fi hotspots. These distractions aim to minimize the perceived waiting and make waiting more pleasant.

In the restaurant context, perceived quality is emerging as an important aspect in generating customer satisfaction and loyalty. Although service is fundamentally intangible, tangible elements such as decoration, food, beverages, seating comfort, etc. must be emphasized. Moreover, the relationship between restaurant staff and customers also determines perceived quality. On this, the quality of service can vary from one employee to another, from one customer to another. Although this may be perceived as a problem, it is a business opportunity insofar as it is possible to provide personalized service to customers. However, in order to meet the requirements of these personalization services, it is fundamental that restaurant managers hire qualified personnel and that these personnel also have the power to make decisions to modify certain characteristics of the service.

Due to the hedonic nature of restaurants, it is obvious that emotions play an important role in the evaluation of services. In addition, the service literature emphasizes the importance of employees expressing socially desirable emotions during service meetings. According to the theory of emotional contagion, the expression of positive emotions by service staff facilitates a corresponding emotional state in customers. Therefore, restaurant managers need to create an environment that stimulates positive emotions. It is recommended to improve interactions between customers and the provider, which would positively impact emotions. It is therefore important to recruit contact (front) staff with the appropriate social and interpersonal skills to work in a restaurant. In addition, the use of sensory marketing will be solicited through music, the color of the room or the smells diffused in the room, or the general atmosphere of the restaurant. These positive emotions will help customers to positively evaluate the service offered.

5.2 Limitations and future research directions

One of the limits of research is undoubtedly the measurement of emotion. Indeed, the information was collected through paper questionnaires (and a pencil). Although many research studies use the same procedure to measure the concept, its relevance is puzzling. Moreover, emotion is a complex phenomenon to capture and can be camouflaged or simulated. Moreover, in the present research, the concept of satisfaction is purely cognitive. It would be interesting to investigate the emotional component of the construct. Finally, a generalization of our results is excluded, as the survey focused on a few restaurants in a specified geographical area. If the survey had been extended to other localities and countries, the results could have been different.

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ARTICLE SCIENTIFIQUE N°11

THE DETERMINANTS OF SATISFACTION IN RESTORATION: THE ROLE OF THE DIMENSIONS OF JUSTICE, EMOTIONS AND DISCONFIRMATION

Auteur(s): Manovosoa Rakotovao, Jérémy Ranjatoelina, Pierre Benjamin Rakotomahenina, Tsirinirina Solofomiarana Rapanoël

Résumé l'article n°11 :

LES DETERMINANTS DE LA SATISFACTION DANS LE CADRE DE LA RESTAURATION : LE ROLE DES DIMENSIONS DE LA JUSTICE, DES EMOTIONS ET DE LA DISCONFIRMATION

Dans cet article, nous nous intéressons aux antécédents de la satisfaction dans le cadre de la restauration. Parmi ces déterminants, nous souhaitons également déterminer lesquels sont les plus influents. Après une clarification, des concepts d'équité, d'émotions et de satisfaction, nous proposons un modèle de recherche. Celui-ci est construit selon l'hypothèse que dans la restauration, l'équité et les émotions affectent la satisfaction. Les données d'une enquête auprès de 300 auprès de 5 restaurants situés à Antananarivo, Madagascar ont fait l'objet de traitement sous équation structurelles. Les résultats confirment en partie nos hypothèses et mettent et confirment entre autres le rôle des éléments cognitifs et affectifs dans la formation de la satisfaction. Nous concluons notre article sur les limites de l'étude et les perspectives de recherche futures.

Mots clés : Équité, émotions positives, émotions négatives, disconfirmation, satisfaction.

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The determinants of satisfaction in restoration: The role of the dimensions of justice, emotions and disconfirmation

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Abstract

In this article, we look at the history of satisfaction in restoration. Among these determinants, we also want to determine which ones are the most influential. After a clarification of the concepts of equity, emotions and satisfaction, we propose a research model. It is built on the assumption that in restoration, equity and emotions affect satisfaction. Data from a survey of 300 of 5 restaurants located in Antananarivo, Madagascar were processed under structural equation. The results partly confirm our hypotheses and, among other things, put and confirm the role of cognitive and affective elements in the formation of satisfaction. We conclude our article on the limits of the study and future research perspectives.

Keywords: equity, positive emotions, negative emotions, disconfirmation, satisfaction

Introduction

The notion of satisfaction has always been at the subject of marketing research, both in the business and in academia area. In the corporate, it means long term profit (Rychalski and Hudson, 2016) [42] because it is strongly linked to consumer post-purchase behaviors such as loyalty (Martínez-Tur et al. 2006) [28]. In the academic area, its importance is evidenced by the growing number of investigations around the subject for years (Oliver, 1980; Oliver and Swan, 1989; Teo and Lim, 2001; Olsen and Johnson, 2003; Martinez-Tur et al., 2006; Rio-Lanza et al., 2009) [32, 33, 35, 45, 36, 13]. While the disconfirmation of expectations paradigm has dominated research for many years, the evolution of research has seen the integration of both emotion and cognition into the design of consumer satisfaction (Phillips, 2002) [37]. Consequently, investigations have conceptualized emotion within the framework of disconfirmation (Phillips, 2002) [37] or even in the model based on equity (Del Rio-Lanza et al., 2009) [13]. However, in the literature, two models: disconfirmation-emotion and equity-emotion are treated separately within the framework of their conceptions of satisfaction and no study has tried to integrate the two theories in a single model whereas the two concepts, although distinct, are considered complementary and both simultaneously influence satisfaction (Oliver and Swan, 1989) [33, 35]. The objective of this research is to combine disconfirmation, equity and emotion in a single model in studies of satisfaction. Moreover, investigations integrating both justice and emotion as the antecedent of satisfaction are considered relatively new and despite the contribution of the results obtained, much remains to be discovered. In addition to this, the majority of these studies have been carried out in the context of service recoveries (Del Rio-Lanza et al., 2009) [13]. On this, it is necessary to make investigations in other contexts such as restoration. Theoretically, this article

allows us to make a contribution on the relative shortcomings highlighted in the current literature. An in-depth study of too few, if not non-existent, studies around a satisfaction model integrating the dimensions of justice, disconfirmation and emotion is necessary. From a methodological point of view, it is interesting to carry out investigations both in other contexts such as restoration and in other cultures to improve the validity of research around these models. This article is organized into five parts. After a review of the literature relating to satisfaction, emotion, equity and disconfirmation, we will present the conceptual research model and the resulting hypotheses. Then, we present the methodology and the results. Finally, we discuss the results of this research.

Literature review and determination of hypotheses

After an overview of the different definitions and models of the satisfaction, this section discusses the concept of emotions, equity and finally, the notion of disconfirmation.

Satisfaction

Satisfaction is presented as a main concept of marketing (Han, 2009) [16] and therefore has been the subject of many investigations for years (Oliver, 1980; Oliver and Swan, 1989; Olsen and Johnson, 2003; Martinez-Tur and al., 2006; Del Rio-Lanza et al., 2009) [32, 33, 35, 36, 28, 13]. Despite the presence of literature on the subject, the authors have found no consensus definition. The divergence is as much about its apprehension in a time frame as about its nature. From a temporal point of view, some authors suggest that satisfaction refers to the most recent transaction (Maxham III and Netemeyer, 2002) [29] where it is defined as an evaluation or an experience in reaction to a particular transaction with a product, an episode or a service (Olsen & Johnson, 2003) [36]. Other authors define it as a cumulative evaluation of the consumer's experiences with the product or

service (Olsen and Johnson, 2003) [36] or an addition of all perceived satisfactions (Maxham III and Netemeyer, 2002) [29]. The other point of disagreement relates to the very nature of satisfaction. In research, the concept refers to cognition (Oliver, 1980) [32], thus, it is defined as judgment after an act of purchase. According to other models, it is equated with emotion in the same way as anger, fear or joy (Hegtvedt and A., 1990; Turner, 2007; Cahour and Lancry, 2011) [17, 46, 7]. From this perspective, it is a positive and pleasant emotion (Cahour and Lancry, 2011) [7]. Other authors in turn support the idea that the study of satisfaction has mainly focused on its cognitive aspect, however this model relates to a dual concept integrating both emotion and cognition (Yu et al. Dean, 2001) [49]. In addition, emotion is what distinguishes satisfaction from quality of service. In addition to this divergence from a temporal point of view and from the point of view of the nature of the concept, there is also a certain difference in the apprehension of satisfaction according to the sector of study. If in the context of student satisfaction, it is presented as a multidimensional concept, integrating elements such as: problems related to trainers, communication, technology, course management (Bolliger and Martindale, 2004) [5]; within the framework of consumer theory, many works define it as a one-dimensional concept (Oliver, 1980) [32]. Other than the conceptualization of the model from a unidimensional or multidimensional point of view, one of the divergences is also around its measurement (Lee et al., 2009) [21]. While some researchers have a certain preference for a single-item scale (Cronin and Taylor, 1992) [11], some authors suggest the use of a multi-item scale (Lee et al., 2009) [21]. The idea of a multi-item measurement scale is relatively accepted due to the complexity of the model and, moreover, to be able to obtain a certain stability in terms of the reliability of the scale in question (Lee et al., 2009) [21]. Despite these differences, the idea that emerges from all these investigations is that satisfaction is an evaluative judgment after a consumption experience. The disconfirmation paradigm of expectations is arguably the best-known model of satisfaction theory. According to this cognitive model, the process of satisfaction occurs through several stages (Oliver & Swan, 1989) [33, 35]. First, consumers set a benchmark against their expectations of a product or service. Second, consumer experimentation reveals the level of performance of the product or service: performance beyond expectations results in positive disconfirmation and furthermore, performance below expectations results in negative disconfirmation. This judgment is then used for the assessment of satisfaction, a positive disconfirmation is associated with satisfaction and a negative disconfirmation is associated with dissatisfaction (Oliver and Swan, 1989) [33, 35]. Despite the importance of disconfirmation of expectations in the literature, some authors admit that the notion is more complex and therefore cannot be explained by the sole idea of a cognitive evaluation process (Churchill and Surprenant, 1982) [9]. This limit of the disconfirmation paradigm has opened up new horizons for research on the subject. Thus, authors have redefined the theory of satisfaction according to the principle of justice (Oliver, 1989; Martinez-Tur et al., 2006) [33, 35, 28]. According to his studies, satisfaction results from a comparison between contribution and remuneration in the context of a transaction. It follows that when the compensation in question is equal to the contribution, satisfaction manifests

itself, and otherwise, there is dissatisfaction. In addition to justice theory, the link between satisfaction and emotion has also been the subject of much investigation (Oliver & Westbrook, 1993; Prayag et al., 2013) [34, 40]. Thereupon, positive emotions positively influence satisfaction and negative emotions negatively impact satisfaction (Prayag et al., 2013; Rychalski and Hudson, 2016) [40, 42].

Emotion
The person is considered the most emotional animal. Among other characteristics, emotion is presented as the one that makes humans unique (Turner, 2007) [46]. It turns out that no other topic has aroused more interest than emotion in sociology (Turner, 2007) [46]. In this case, the importance of the subject lies in the fact that not only do emotions play a fundamental role in survival (Richins, 1997) [41], but they also constitute the first system of motivation for the person (Izard, 1977) [18], and communicate a signal of intentions (Plutchik & Kellerman, 1989) [38]. In consumer theory, the affective is an important area for studying behavior (Richins, 1997; Lee et al., 2008) [41, 22]. Even if there are interests around the subject, the current literature does not provide a consensual definition of emotion. This is undoubtedly the fact that besides the complexity of the phenomenon, it concerns not only the field of psychology and sociology, but also other disciplines. Thus, in the context of biology, the notion of emotion is presented as a change at the level of the human body (Turner, 2007) [46]. From a cognitive perspective, it is defined as a conscious feeling through a specific referent (Turner, 2007; Prayag et al., 2013) [46, 40]. Following a cultural approach, it refers to words and labels that humans associate with particular physiological states of arousal (Turner, 2007) [46]. Even within the framework of consumer theory alone, there are at least more than two dozen definitions of emotion (Richins, 1997) [41]. Besides the definition of the model, the divergence is also situated within the framework of the dimensions which compose it. Some authors advance the idea of a two-dimensional model (Mano and Oliver, 1993) [27] composed of pleasures and excitations, while other authors advance three dimensions by integrating a dimension of domination or control (Lee et al., 2008) [22]. In consumer satisfaction, research around emotion has focused on a categorization perspective (Oliver and Westbrook, 1993) [34]. However, along with definition or dimensions, the problem of measuring emotion happens to be a major concern in the psychology of emotion (Plutchik & Kellerman, 1989) [38]. If Ekman (1982) [14] puts forward six basic emotions (anger, disgust, fear, happiness, sadness and surprise), Plutchik and Kellerman (1980) [39] put forward eight elements including: fear, anger, joy, sadness, acceptance, disgust, expectation and surprise. From other perspectives, Izard (1977) [18] identified ten elements: anger, contempt, disgust, distress, fear, guilt, interest, joy, shame, surprise. In this research, emotion is categorized according to the ideas of Liljander and Strandvik (1997) [24].

Equity
In the context of social exchange, the notion of equity has always been associated with the theory of distributive justice. From this perspective, a transaction is described as fair when a person engaged in an exchange finds that their reward / contribution ratio is equal to the reward / contribution ratio of the other party (Oliver and Swan, 1989)

[33, 35]. Equity depends on how each party perceives the course of the trade. Furthermore, it induces an idea of comparison with a reference which can be an individual with whom it is in relation, or even a group of people, an organization or the individual himself in relation to his previous experiences (Xia *et al*. al., 2004) [48]. The most significant limitation of the equity rule, from the perspective of distributive justice, is that it attaches importance only to the last stage of the distribution process (Leventhal, 1976) [23]. Thus, the equity judgment only takes into account the outcome or gains from the exchange, ignoring the process or course of the exchange. However, it would be equally interesting to integrate the notion of procedural justice. In addition to judging the relationship between contribution and retribution, equity would also be assessed by judging whether retribution or the process mobilized for the acquisition of retribution is reasonable, acceptable or just. Thus, procedural justice relates to the equity of the way in which rewards are distributed (Hegtvedt, 1990) [17]. The importance of the resource allocation procedure is that, due to its stability, it gives information about future results (Brockner and Wiesenfeld, 1996) [6]. As a result, procedures perceived as fair lead to more optimism leading to a favorable outcome. Leventhal (1976) [23] puts forward the idea that the evaluation of the procedural components of justice influences the perception of the distribution of the result. If the procedures are seen to be fair, so would the outcome, even if it were unfavorable. Otherwise, when the individual does not trust the process, he also loses confidence in the decisions. Interactional justice is presented as the latest and most recent of the components of justice. It was induced following a certain divergence on the conceptualization of procedural justice. In fact, initially procedural justice is presented as a multidimensional concept integrating both structural and interactional elements (Cropanzano and Greenberg, 1997) [12]. Subsequently, authors have put forward the idea that interactional factors are entirely independent of procedural justice and presents itself as an integral dimension of justice (Bies and Moag, 1986) [3]. While it is widely accepted that procedural justice refers to the way people are treated during a process (Blodgett *et al*., 1997) [4], there is some divergence in the elements that make it up. While some authors advance ideas such as courtesy, sensitivity, treatment and the effort made to address consumers' needs (Del Rio-Lanza *et al*., 2009) [13], others advocate more or less distant ideas in highlighting components such as: courtesy, politeness or the level of language used (Chebat and Slusarczyk, 2005) [8] or friendliness, sensitivity, interest, honesty, frankness and preoccupation or effort.

Disconfirmation
The disconfirmation paradigm of expectations has always been the dominant model of satisfaction theory. From this perspective, satisfaction emerges from a multi-step process (Oliver & Swan, 1989; Phillips, 2002) [33, 35, 37]. First, consumers develop a benchmark, to assess the performance of the product or service. During the consumer experience, there is a comparison between the perceived performance and the benchmark. Therefore, if the perceived performance exceeds the comparison standard, there is a positive disconfirmation, otherwise, there is a negative disconfirmation. The degree of satisfaction or dissatisfaction that results is a function of the positive or negative

disconfirmation (Oliver and Swan, 1989) [33, 35]. Positive disconfirmation is associated with satisfaction, and negative disconfirmation is associated with dissatisfaction (Oliver, 1980) [32]. However, previous research points to a certain limit to this idea (Sundar and Noseworthy, 2016) [44], in certain circumstances, the disconfirmation would not follow such a liberating path, especially in the case of negative disconfirmation. Consumers treat the disconfirmation according to the level of the expectation violation. In this context, there are two kinds of violation: a basic violation that affects the very purpose of the product and device violations that only affect the elements that complement functionality such as packaging, colors (Sundar and Noseworthy, 2016) [44]. It shows that when a negative disconfirmation is related not to the object, but to the peripherals, it can lead to satisfaction (Sundar & Noseworthy, 2016) [44].

Research modeling and hypothesis formulation
Several studies have highlighted the existence of a link between justice and satisfaction (Oliver and Swan, 1989; Del Rio-Lanza *et al*., 2009; Martinez-Tur *et al*., 2006) [33, 35, 13, 28]. Consumers assess what they think is right by comparing the perception of their experiences to a benchmark they believe to be (Teo and Lim, 2001) [45]. In the context of this study, references relate to the principles of price equity (or distributive justice), process equity (or procedural justice) and finally, interactional justice. From this perspective, hypotheses have been formulated as follows.

H1a: Distributive justice positively influences satisfaction.
H1b: Procedural justice positively influences satisfaction.
H1c: Interactional justice positively influences satisfaction.

The relationship between dimensions of justice and emotions has been the subject of a number of research studies (Chebat and Slusarczyk, 2005; Schoefer and Ennew, 2005) [8, 43]. Although the results put forward the idea of a relationship between perceived justice and emotion (Chebat and Slusarczyk, 2005) [8], there is a certain inconsistency of the results obtained in relation to the weights of the three dimensions on the emotion. Regarding distributive justice, the link between this dimension and emotion is confirmed (Chebat and Slusarczyk, 2005) [8]. If the pay is lower than expected, consumers show anger and aggression. Conversely, if it exceeds expectations, there is a feeling of guilt (Weiss *et al*., 1999) [47]. Procedural justice impacts emotions (Del Rio-Lanza *et al*., 2009) [13]. Guilt arises if the procedure is biased in favor of the individual in question (Weiss *et al*., 1999) [47]. In the context of job satisfaction, it turns out that this dimension is the most important predictor of satisfaction (Lind and Tyler, 1988) [25]. Finally, concerning interactional justice, there is a certain inconsistency in the results, on the one hand, research supports the idea of a link between interactional justice and emotion (Chebat and Slusarczyk, 2005) [8] while on the other hand, some authors admit that this dimension has no impact on emotion (Del Rio-Lanza *et al*., 2009) [13]. Following these ideas:

H2a: Distributive justice influences positive emotions.
H2b: Distributive justice influences negative emotions.
H2c: Procedural justice influences positive emotions.
H2d: Procedural justice influences negative emotions.
H2e: Interactional justice influences positive emotions.
H2f: Interactional justice influences negative emotions.

Emotion appears to be an important element in predicting consumer behavior (Lee *et al.*, 2008; Prayag *et al.*, 2013; Rychalski and Hudson, 2016) [22, 40, 42]. According to previous research, emotion appears to be an important element in evaluating an experience and in explaining a reaction such as satisfaction (Prayag *et al.*, 2013) [40]. Thus, positive emotions have a positive impact on satisfaction and conversely, negative emotions have a negative impact on the latter (Phillips, 2002; Prayag *et al.*, 2013) [37, 40]. From this perspective:

H3a: The positive emotions felt during the consumption experience influence satisfaction.

H3b: Negative emotions felt during the consumption experience influence satisfaction

The disconfirmation model is presented as the best-known model in satisfaction theory and has been the subject of many variations over the years (Oliver and Swan, 1989) [35, 33]. Most of his research has come to the conclusion that disconfirmation impacts satisfaction (Oliver, 1980; Oliver & Swan, 1989) [32, 33, 35]. Then:

H4: Disconfirmation positively influences satisfaction.
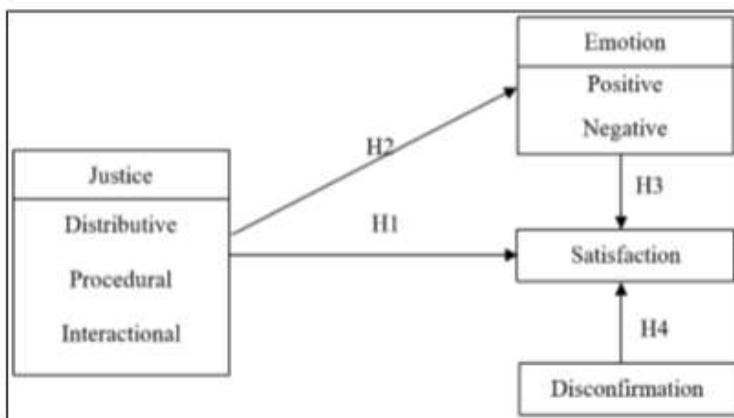
Fig 1: The global research model

Methodology and data
This part first proposes the definition of the measuring instruments for each of the models. The sampling and data collection will be presented in a second step, as well as the adopted analysis method.

Measures
All of the measurement scales we have used are all taken from the literature. We have adapted them according to the context of the study. The items for distributive justice, positive and negative emotions are those initiated by Namkung and Jang (2010) [30]. The measures of disconfirmation, procedural justice and interactional justice are those proposed by Martínez-Tur *et al.* (2006) [28]. Finally, the satisfaction measurement is inspired by Han and Ryu (2009) [16]. Table 1 illustrates the different definitions for each model.

Table 1: Definition of the dimensions used

Model	Definition	References
Distributive justice	Consumer perception if this is the right price.	(Namkung et Jang 2010) [30]
Disconfirmation	Consumer perception of issues, benefits and the overall shopping experience.	(Martinez-Tur *et al.* 2006)
Positive emotions	Refers to joy, tranquility and refreshment.	(Namkung et Jang 2010) [30]
Negative emotions	Refers to anger, distress and disgust.	(Namkung et Jang 2010) [30]
Procedural justice	Refers to waiting time and accessibility of employees	(Martinez-Tur *et al.* 2006)
Interactional justice	The extent to which employees have shown caring and individual attention to customers.	Martinez-Tur *et al.* 200
Satisfaction	Global judgment process of the perceived gap between past expectations and actual consumption.	(Han et Ryu 2009) [16]

To ensure the validity of the content, the questionnaire was refined by a rigorous pre-test, initiated with the aim of verifying the clarity of the questions. During the pre-test, 10 individuals were invited to comment on the questions and their formulations. The feedback from these 10 people formed the basis for the review of our measurement scales.

Sampling and data collection
The research was conducted among consumers of five restaurants of various specialties. To ensure the good reliability of the structural equation model, the number of responses must be 5 to 10 times greater than the number of

items (Janssens *et al.*, 2008) [19]. In this research, the largest scale has three items. The minimum number required to validate the scale is at least 15 responses that is to say 5 times the 3 items. Loehlin (2004) [26], for his part, puts forward the idea of a sample of 100 to 200 individuals, he concludes that the model behaves correctly if the size of the sample respects this condition. Given these methodological recommendations, the difficulties related to the survey, the availability of individuals to question, the length of our questionnaire, we conducted a face-to-face survey of 300 individuals.

Data analysis
The data obtained are processed with Smart PLS 3 software. First, the measurement scale was tested, then a structural equation modeling made it possible to test the advanced hypotheses. These analyzes yielded the following results.

Results
After the presentation of the convergent and discriminant validity test of measurement scales, this section will discuss the result following the test of the structural model.

Measurement scale test
Before testing the structural model, the reliability, convergent and discriminant validity of the models should be established.

Table 2: Presentation of measurement scales

Model / measure	λ	Reliability	AVE
Disconfirmation			
During your lunch / dinner at this restaurant, you encountered fewer "problems" than you expected	0.849	0.843	0.642
You saw more benefits than you expected	0.724		
Restaurant quality was better than you expected	0.825		
Positive emotions			
Peacefulness	0.801	0.829	0.709
Refreshment	0.881		
Negative emotions			
Anger (anger)	0.898	0.908	0.832
Disgust	0.926		
Distributive justice			
The food you ordered was reasonably priced	0.916	0.909	0.834
The cost seemed appropriate in relation to the service	0.911		
Interactional Justice			
Employees at this restaurant understand each customer's needs	0.851	0.876	0.702
Employees of this restaurant provide personal attention	0.788		
The employees of this restaurant are very involved in the care of customers	0.873		
Procedural justice			
I waited a long time for someone to take care of me (reverse item).	0.704	0.869	0.692
I felt frustrated because the employees did not respond to my service requests (item reversed).	0.919		
I had to make efforts to attract the attention of the employees (reverse item).	0.858		
Satisfaction			
Overall you are happy with this restaurant	0.879	0.866	0.764
You had a good time in this restaurant	0.869		

The reliability test gave results greater than 0.7 (between 0.829 and 0.909), an acceptable threshold according to Nunnally and Bernstein (1994) [31], which confirms the reliability of the measurement scales used (Fornell and Larcker, 1981) [15]. Regarding the validity test, Bagozzi and Yi (1988) suggest that convergent validity is ensured by λ greater than 0.7. Table 2 shows that all λ are greater than their recommendations. In addition, the extracted mean variances (AVE) are greater than 0.5, which makes it possible to establish the convergent validity of the models

(Fornell and Larcker, 1981) [15]. We used the square root of the AVEs to verify discriminant validity (Fornell and Larcker, 1981) [15], (the values in bold in the diagonal of the correlation matrix of the latent variables). From Table 3, these values are greater than those below the diagonal. This means that the relationships between the latent variables are weaker than those between the model and their manifest variables. Consequently, the discriminant validity of our models is verified.

Table 3: Correlation between the different models

	1	2	3	4	5	6	7
Disconfirmation	0.801						
Negative emotion	-0.008	0.912					
Positive emotion	0.242	-0.257	0.842				
Distributive justice	0.397	-0.113	0.268	0.913			
Interactional justice	0.333	-0.391	0.280	0.353	0.838		
Procedural justice	0.457	-0.446	0.377	0.237	0.639	0.832	
Satisfaction	0.533	-0.243	0.360	0.330	0.494	0.590	0.874

Structural model test
To evaluate the structural model, the coefficient of determination (R2) of each dependent variable, the structural coefficients (β) and the level of significance (t-

value) were examined. The values of R2 are above the recommended threshold 0.10 (between 0.176 to 0.470) (Falk and Miller, 1992).
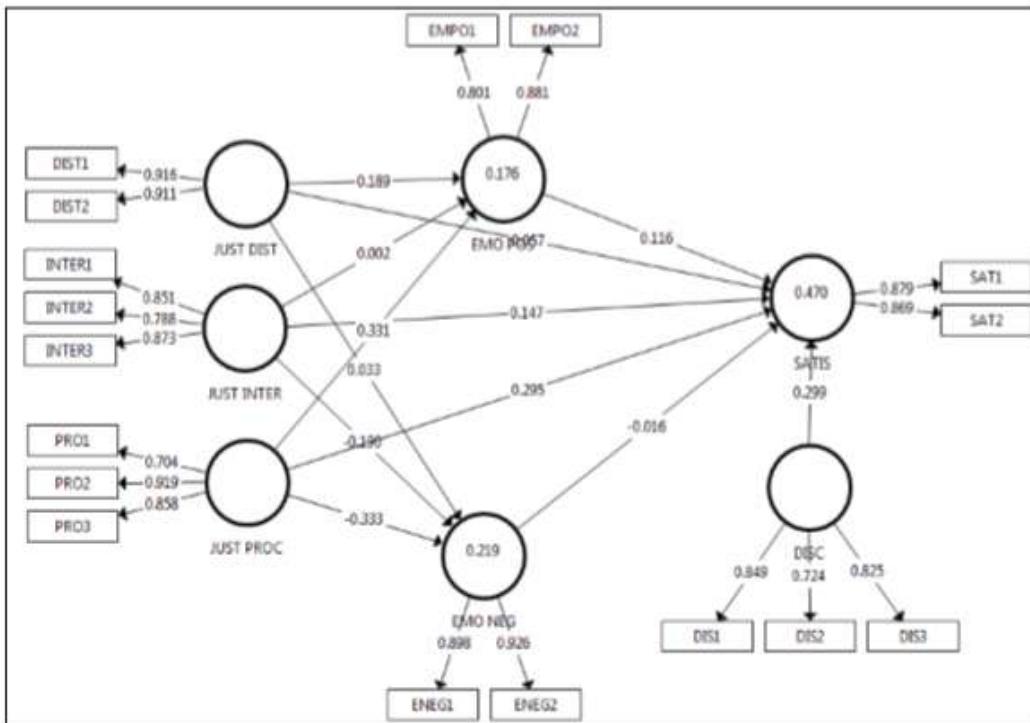
Fig 2: Structural model

Table 4: Result of causal links

Link	Hypothesis	Structural Coef	t-value	p-value	Results
Disconfirmation -> Satisfaction	H4	0.299	4.547	0.000	Confirmed
Emotions (-) -> Satisfaction	H3b	-0.016	0.226	0.821	Not confirmed
Emotions (+) -> satisfaction	H3a	0.116	2.213	0.027	Confirmed
Just distributive -> Emotions (-)	H2b	0.033	0.567	0.571	Not confirmed
Just distributive -> Emotions (+)	H2a	0.189	3.318	0.001	Confirmed
Just distributive -> Satisfaction	H1a	0.057	1.108	0.268	Not confirmed
Just interactional -> Emotions (-)	H2f	-0.190	2.296	0.022	Confirmed
Just interactional -> Emotions (+)	H2e	0.002	0.032	0.975	Not confirmed
Just interactional -> Satisfaction	H1c	0.147	2.124	0.034	Confirmed
Procedural justice -> Emotions (-)	H2d	-0.333	4.595	0.000	Confirmed
Procedural justice -> Emotions (+)	H2c	0.331	4.854	0.000	Confirmed
Procedural justice -> Satisfaction	H1b	0.295	3.830	0.000	Confirmed

The objective of this part is to examine the causal relationships between, the dimensions of justice, emotions, disconfirmation and satisfaction. The results show that interactional justice and procedural justice positively impact satisfaction (β = 0.147, ρ <0.05; β = 0.295, ρ <0.05), therefore, H1c, and H1c are confirmed. However, distributive justice does not impact satisfaction. Regarding the relationship between the dimensions of justice and emotions, on the one hand, distributive justice and procedural justice impact positive emotions (β = 0.189, ρ <0.05; β = 0.331, ρ <0.05); on the other hand, interactional justice and procedural justice impact negative emotions (β = 0.-190, ρ <0.05; β = 0.333, ρ <0.05). As a result, H2a, H2c, H2d and H2f are confirmed. The same is true for the relationship between negative emotions and satisfaction (β = 0.116, ρ <0.05), which confirms H3a. Otherwise, negative emotions do not impact satisfaction. Lastly, the disconfirmation impacts on satisfaction (β = 0.299, ρ <0.05), therefore, H4 is confirmed.

Discussions
This research aims to test a satisfaction model integrating the dimensions of justice, emotions and disconfirmation. First, regarding the link between distributive justice and satisfaction, the results confirm the conclusions of other investigations suggesting that there is no relationship between the two models (Chebat and Slusarczyk, 2005) [8]. However, the place of distributive justice in the formation of satisfaction gives rise to debate. While some works have emphasized the importance of the model in the formation of satisfaction (Oliver and Swan, 1989) [33, 35], others have advanced the idea that distributive justice does not influence satisfaction in any way (Chebat and Slusarczyk, 2005) [8]. Our studies have provided empirical support for the idea that there is no link between this model and satisfaction. Regarding the link between distributive justice and emotions, while this dimension positively impacts positive emotions, it does not influence negative emotions. These results are not identical to those found by other authors

(Namkung and Jang, 2010) [30] indicating the existence of a link between this dimension and the two components of emotion. Second, regarding interactional justice, a good deal of research supports the idea of a close link between model and satisfaction (Blodgett *et al.*, 1997; Chebat and Slusarczyk, 2005) [4, 8]. According to some authors, it even happens to be the only dimension that really impacts satisfaction (Chebat and Slusarczyk, 2005) [8]. Our results, without asserting that it is the only determinant of satisfaction, support the idea of a relationship between the two models. Regarding its link with emotions, while the model influences negative emotions, it has no impact on positive emotions. Third, regarding the relationship between procedural justice and satisfaction, our results suggest a positive link between the two concepts. Like distributive justice, the place of procedural justice is not clear in the formation of satisfaction. On the one hand, some authors advance the idea of a strong relationship between the two constructs (Del Rio-Lanza *et al.*, 2009) [13], on the other hand, other researchers conclude that this dimension has no effect on satisfaction (Maxham III and Netemeyer, 2002; Chebat and Slusarczyk, 2005) [29, 8]. Our research results have supported the idea of procedural justice as the antecedent of satisfaction. In addition, this dimension has an impact on both positive and negative emotions. Besides the idea of an unstable relationship between the dimensions of justice and satisfaction, the impact of these dimensions on emotions shows also some divergence. By the way, according to our results, there is only procedural justice that impacts both positive and negative emotions. While distributive justice only impacts positive emotions, interactional justice only impacts negative emotions. However, according to Chebat and Slusarczyk (2005) [8], these three dimensions impact both positive and negative emotions. According to yet other perspectives, distributive justice impacts on positive and negative emotions, interactional justice only impacts positive emotions unlike procedural justice which only impacts negative emotions (Namkung & Jang, 2010) [30]. Moreover, the importance of interactional justice on negative emotions is confirmed (Namkung & Jang, 2010) [30]. This instability of the relationship between dimensions of justice and emotions can be explained by the fact that by their complex nature, emotions are difficult to grasp. There may be camouflaged or simulated emotions, they can be multiple at the same time and ambivalent (Cahour and Lancry, 2011) [7]. Our studies have confirmed the idea that emotions are produced through an individual's cognitive assessment of the environment (Lazarus, 1991). In this case, like the investigations made within the framework of the claim for services (Schoefer and Ennew, 2005) [43], the dimensions of justice allow this evaluation, which subsequently explains the formation of emotions. Fourth, regarding the link between emotions and satisfaction, while positive emotions impact satisfaction, negative emotions have no influence on the latter. If initially, these results are identical to those found by Lee *et al.* (2008) [22], they differ from those found by other researchers (Liljander and Strandvik, 1997) [24] who state such a significant influence of positive and negative emotions on satisfaction. While it has been confirmed that emotions guide judgments and evaluations (Cahour and Lancry, 2011) [7], its place is not stable in the formation of satisfaction. On this, contrary to our work which emphasizes the importance of positive emotions, other research leads to

a more important relation between satisfaction and negative emotions. (Liljander and Strandvik, 1997) [24]. Finally, the results of our research support the important place of disconfirmation in the formation of satisfaction. These results support the views of Oliver and Swan (1989) [33, 35] that although being a process of comparison like fairness, it is necessary to distinguish the two processes. Moreover, it is just as interesting to study them in a single model for their complementarities. In our research, disconfirmation is the element that most impacts satisfaction, followed by procedural justice, interactional justice, and positive emotions. Although our results confirm the idea of a cognitive perspective through the disconfirmation of expectations, it is confirmed that a theory of consumers in a purely rational framework omitting any emotional idea does not find its full relevance. Our results empirically support the complementarity of cognitive and emotional elements in the formation of satisfaction.

Conclusions

These findings have several implications for managers working in the restaurant business. Firstly, our studies will help managers better understand consumer satisfaction and secondly, to understand what type of justice impacts on emotions and what type of emotions impacts on satisfaction. This information will make it possible to put in place strategies to influence the perception of justice, to create positive emotions to better satisfy customers. First, managers need to be aware of the technical, time, material and financial means of treating clients adequately in functional and interpersonal terms. Specific training and remuneration policies, as well as job descriptions, could help provide excellent service from a procedural and interactional justice perspective. In addition, restaurateurs must be very attentive to the implementation of policies relating to interactional equity by training the waiters to exhibit the appropriate traits, such as politeness, courtesy, impartiality. Because of the hedonic nature of restaurants, it is obvious that emotions play an important role in the evaluation of services. In addition, the literature emphasizes the importance for employees to express socially desirable emotions during service meetings. According to the theory of emotional contagion, the expression of positive emotions by service personnel facilitates a corresponding emotional state in clients. Therefore, restaurant managers must create an environment that stimulates positive emotions. It is recommended to improve interactions between clients and provider, which would impact on positive emotions. It is therefore important to recruit contact staff with the appropriate social and interpersonal skills to work in a restaurant. In addition, the use of sensory marketing will be sought through, the music, the color of the room or the smells diffused in the room, or the general atmosphere of the restaurant. These positive emotions will help customers to positively assess the service offered. In addition, staff play a key role in satisfaction. Restaurant managers should keep in mind that dissatisfied staff contributes in a limited way to customer satisfaction. Consequently, in order to satisfy staff upstream, managers must give them the opportunity to develop personally and professionally, to be able to organize their work themselves and the right to speak about decisions that concern them. In addition, they must help employees balance family and work, improve the physical working conditions in restaurants and award

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ARTICLE SCIENTIFIQUE N°12

MUSICAL QUALITY, PERCEIVED VALUE, EQUITY IN SATISFACTION AND BEHAVIORAL INTENTION IN A JAZZ FESTIVAL

Membres du comité de lecture (IJMRD)**:**

Résumé l'article n°12 :

**LA QUALITE MUSICALE, LA VALEUR PERÇUE, L'EQUITE DANS LA
SATISFACTION ET L'INTENTION DANS LE CADRE D'UN FESTIVAL DE JAZZ**

Cet article se propose de revisiter la théorie de la satisfaction en intégrant la qualité musicale, la valeur utilitaire et émotionnelle, l'équité et l'intention comportementale des consommateurs dans un même modèle. L'étude a été menée dans le cadre d'un festival de jazz auprès de 140 individus. Dans un premier temps, les résultats indiquent l'influence de la qualité musicale, de l'équité, de la valeur émotionnelle et de la valeur utilitaire sur la satisfaction. Dans un second temps, la qualité musicale et l'équité influencent la valeur émotionnelle et la valeur utilitaire. Enfin, il se trouve que la valeur émotionnelle, la valeur utilitaire et la satisfaction influencent les intentions comportementales des consommateurs.

Mots clés : Qualité musicale, équité, valeur émotionnelle, valeur utilitaire, satisfaction, intention comportementale.

Certificat de publication de l'article n°12:

MUSICAL QUALITY, PERCEIVED VALUE, EQUITY IN SATISFACTION AND BEHAVIORAL INTENTION IN A JAZZ FESTIVAL

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ABSTRACT

This article proposes to revisit the theory of satisfaction by integrating musical quality, functional and emotional value, as well as equity and consumer behavioral intention in the same model. The study was conducted in the context of a jazz festival with 140 individuals. Initially, the results indicate the influence of musical quality, fairness, emotional value and utility value on satisfaction. In a second step, musical quality and fairness influence emotional value and functional value. Finally, it turns out that emotional value, utility value, and satisfaction influence consumers' behavioral intentions.

KEYWORDS: *Musical quality, equity, emotional value, utility value, satisfaction, behavioral intention.*

1. INTRODUCTION

From an economic perspective, festivals have significant impacts on the local economy because of the jobs they generate. Apart from this economic aspect, the socio-cultural impacts of festivals are just as significant. Indeed, they contribute to community cohesion and cultural preservation.

In the literature on consumer behavior, satisfaction has always been considered a central concept and has been the subject of numerous investigations. In addition to satisfaction models based on the disconfirmation of expectations or perceived quality, the theory of satisfaction according to the theory of equity has its place in the literature (Rakotovao and Cliquet, 2018).

In recent years, perceived value has been presented as a better explanation of consumer behavior (Heskett, Sasser and Schlesinger, 1997). Interest in the subject is recognized in the business as well as in the academic world. In the business area, perceived value is strongly linked to consumers' purchasing intentions. It constitutes a source of competitive advantage and is linked to marketing variables such as segmentation or differentiation (Heskett, Sasser and Schlesinger, 1997). In the academic area, the abundance of research attests to the importance of the subject.

Although perceived value, perceived quality and equity are recognized as important in explaining satisfaction, it is rare to see all three concepts simultaneously in the same model. Moreover, no

investigation in this sense has been developed in the context of festivals. The objective of this research is to combine perceived value, perceived quality and equity in a single model in order to explain consumer satisfaction and behavioral intent in the context of festivals. On the theoretical level, the aim is to compensate for the relative shortcomings revealed in the current literature. A finding that there is too little research adopting this perspective leads to a greater interest in the subject. On the methodological level, more investigations in fields such as festivals are necessary to establish the validity of the research.

This article is organized in five parts. After a review of the literature on musical quality, equity, value, satisfaction and intent, we will present the conceptual research model and the hypotheses that emerge from it. We then present the methodology and results. Finally, we discuss the results of this research.

2. LITERATURE REVIEW

After an overview of musical quality and equity, this section discusses the concept of perceived value and satisfaction. The concept of behavioral intention is discussed at the end of the section.

2.1 Musical quality

Perceived quality has always been at the center of marketing research. Although it has been the subject of research for many years, it is difficult to find a universal definition of perceived quality. Some authors define it as a consumer's judgment of the excellence or superiority of a product or service. Other authors suggest that there is a difference between customers' expectations and perceptions of service (Zeithaml, Leonard Berry and Parasuraman, 1996). Nevertheless, an analysis of all of these definitions brings out the idea of a confrontation between a prior expectation of the consumer and his or her impressions of a service. The result is that if the quality delivered exceeds expectations, the perceived quality is high, on the other hand, if it is below expectations, the perceived quality is low.

Investigations of perceived quality in the context of music festivals are rare (Thrane, 2002). During a jazz festival, music is the main factor of satisfaction (Thrane, 2002). Therefore, measuring quality from a purely musical perspective justifies a focus on performance at a festival (Thrane, 2002).

2.2 Equity

According to the traditional conceptualization of equity, a transaction is described as fair when a person engaged in an exchange feels that his or her compensation/contribution ratio is equal to the compensation/contribution ratio of the other party. In reality, however, the parties in an exchange involve multiple and heterogeneous contributions and outcomes. Following this idea, in addition to the traditional conception focused on its distributive component alone, equity is presented as a

multidimensional concept that also integrates procedural and interactional equity (Rakotovao and Cliquet, 2018).

Procedural fairness refers to the fairness of the process leading to the outcome. From this perspective, the evaluation of the process influences the perception of reward. If the procedures are perceived as fair, the retribution would also be perceived as fair, even if the retribution was unfavorable. Otherwise, when the individual does not trust the process, he or she also loses confidence in the decisions.

The final dimension of fairness concerns interactional fairness. It refers to how people are treated during a process. Considered the most recent of the dimensions of equity, there is some divergence in the elements that make it up. While some authors put forward ideas such as ethics and honesty displayed by the provider, others put forward components such as: courtesy, politeness or the level of language used (Rakotovao and Cliquet, 2018).

In this research, we adopt a broad understanding of equity. It refers to the extent to which clients felt they were treated fairly and equitably (Hutchinson, Lai & Wang, 2009).

2.3 Satisfaction

Satisfaction is a central concept in marketing and has therefore been the subject of numerous investigations over the years. The research around the subject is mainly influenced by the paradigm of the disconfirmation of expectations. According to this model, satisfaction is the result of a comparison between expectations and perceived performance through positive or negative disconfirmation. However, despite the dominance of the paradigm of the disconfirmation of expectations, some authors admit that the notion is more complex and therefore cannot be explained by the idea of a cognitive evaluation process alone. This limitation of the disconfirmation paradigm has opened up other horizons for research on the subject. For example, some authors have redefined satisfaction theory according to the principle of equity. According to this work, satisfaction results from a comparison between contribution and reward in the context of a transaction. It follows that when the reward in question is equal to the contribution, satisfaction is manifested. Otherwise, dissatisfaction occurs.

2.4 Perceived value

Despite many investigations on the subject, there is no consensus definition of perceived value. On the one hand, it is defined as an overall assessment made by the consumer of the usefulness of a product between what is received and what is due. On the other hand, it refers to the difference in value perceived by customers between the quality or benefits of the product/service and the sacrifice made in paying for it. As a result, perceived value refers to a functional perspective where cognitive and

economic evaluations are mobilized to judge a cognitive trade-off between benefits and costs (Lee, Lee & Choi, 2011).

Although perceived value appears to be a multidimensional concept (Sweeney and Soutar, 2001), there is some divergence in the number and nature of the dimensions that make it up. On the one hand, it is presented as a concept with five dimensions: functional, social, emotional, epistemic and conditional value. From other perspectives it is composed of four dimensions: two functional elements (quality/performance and price/value), an emotional element and a social element (Sweeney and Soutar, 2001). Other researchers propose three dimensions: functional value, emotional value and overall value. In the present research, perceived value is conceptualized from a two-dimensional perspective: functional value and emotional value (Lee, Lee & Choi, 2011).

2.5 Behavioral intention

In the literature, there is no universal definition of behavioral intention, however, the following few definitions provide an understanding of the concept. According to investigations, it refers to the degree to which a person has formulated conscious plans to carry out or not carry out a specified future behavior. Other research, in turn, puts forward ideas of behavioral intention such as an individual's beliefs about what he or she intends to do in a given situation (Ajzen & Fishbein, 1980).

Consumer present positive behavioral indicators when they say positive things about the provider (Zeithaml, Leonard Berry, & Parasuraman, 1996), recommend the provider to other consumers. As a result, they buy more, or are willing to pay a high price, and express loyalty to the provider (Zeithaml, Leonard Berry, and Parasuraman, 1996). Conversely, negative behavioural intentions can be understood in terms of different forms of complaints (to the seller, privately or to an external agency), the willingness to reduce the volume of transactions with the provider, or the willingness to switch to competition altogether (Zeithaml, Leonard Berry, and Parasuraman, 1996).

3. RESEARCH MODEL AND HYPOTHESES

Quality of service has a positive impact on the perceived value to customers (Hutchinson, Lai and Wang, 2009). The less money, time, and energy the customer spends on quality, the higher the perceived value of the service. That said, the higher the quality of service, the higher the perceived value. This research views value as a two-dimensional concept composed of functional value and emotional value. This concept is based on the following two assumptions:

H1: Musical quality positively influences emotional value.

H2: Musical quality positively influences the functional value.

The link between perceived quality and satisfaction has been the subject of numerous investigations and three fundamental ideas emerge from this work. Three conceptions stand out: first, perceived quality is presented as an antecedent to satisfaction; second, satisfaction is seen as an antecedent to perceived quality; and third, there is no link between the two: satisfaction and perceived quality (Tkaczynski and Robin, 2010). In a festival context, it seems that the idea of service quality as an antecedent to satisfaction is adopted by the majority of investigations (Tkaczynski and Robin, 2010). Moreover, during a jazz festival, the main product is jazz music (Thrane, 2002). These ideas provide the basis for the following hypothesis:

H3: Musical quality positively influences satisfaction. Little research has investigated the relationship between equity and perceived value (Hutchinson, Lai and Wang, 2009). However, according to this limited research, there is a positive link between the two constructs (Hutchinson, Lai and Wang, 2009). The relationship between equity and perceived value is supported by arguments that cost reduction increases consumer utility associated with the purchase in question. From this perspective, a perception of fairness by customers is positively associated with a perception of perceived value for the service. These arguments support the following hypothesis:

H4: Fairness positively influences emotional value.

H5: Equity positively influences functional value.

Several studies highlight the existence of a link between equity and satisfaction (Rakotovao and Cliquet, 2018). Consumers evaluate what they consider fair by comparing the perception resulting from their experiences. This idea is based on the following hypothesis:

H6: Equity positively influences satisfaction.

Values are linked to other post-consumption constructs such as satisfaction and behavioral intentions. Supporting this idea, perceived value is considered a determinant of satisfaction and behavioral intention. The following hypotheses can be derived from this:

H7: Emotional value positively influences satisfaction.

H8: Functional value positively influences satisfaction.

As well as the link between satisfaction and behavioral intention, there also appears to be a link between perceived value and consumer behavioral intention (Hutchinson, Lai and Wang, 2009). This leads to the following two hypotheses:

H9: Emotional value positively influences the consumer's behavioral intention.

H10: Functional value positively influences the consumer's behavioral intention.

Satisfaction can reinforce the customer's decision to use a particular service brand on a given occasion. From this perspective, the more satisfied the consumer is, the higher the intention to buy back and recommend the service provider, hence the following hypothesis:

H11: Satisfaction positively influences the consumer's behavioral intention.

The overall research model is as follows:
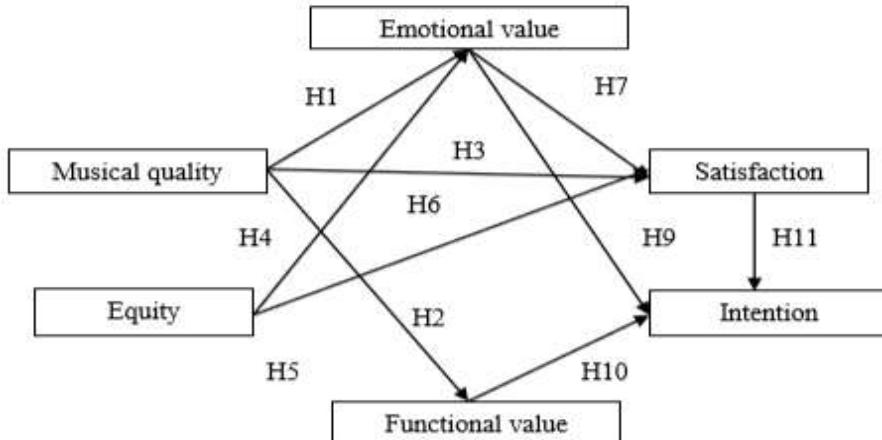
Figure 1: The overall research model

4. METHODOLOGY
4.1 Measures
This study adapted the measures used to operationalize the constructs included in the investigated model. Items for measuring equity were initiated by Hutchinson, Lai and Wang (2009). Quality is captured by the Thrane (2002) items. Measures of functional value and emotional value are inspired by the work of Lee, Lee and Choi (2011). Satisfaction is measured by the items developed by Wong, Wu and Cheng (2014). Finally, the measure of consumer behavioral intention is inspired by the Bajs scale (2015). All items were measured using a five point Likert-type scale (ranging from 1=strongly disagree to 5= strongly agree).

4.2 Subjects and procedure
The research was conducted during the Madajazcar Jazz Festival that took place between October 3 and 17, 2019 in Antananarivo. Information was collected through a questionnaire from 140 individuals. To ensure the reliability of a model of structural equations, according to Janssens et al (2008) the number of responses should be 5 to 10 times higher than the number of items. In this research, the scale that has the highest number of items is the sound quality scale. The minimum number required to validate the scale is at least 25 responses, i.e. 5 times the 5 items. Loehlin (2004), for his part, puts forward the idea of a sample size of 100 to 200 individuals and concludes that the model behaves correctly if the sample size meets this condition. Given these methodological recommendations, the difficulties related to both the survey and the availability of individuals to question, and the length of our questionnaire, we conducted a survey of 140 individuals.

4.3 Statistical Analysis
The data obtained is processed with the SmartPLS 3 software. First, the reliability and validity of the measurement model was examined, then, he structural model also was analyzed to test the associations hypothesized in the present research model.

5. RESULT
5.1 Measurement model
Prior to testing the structural model, the reliability, convergent and discriminant validity of the constructs must be established.

Table 1: Scales measurement

Construit/mesure	λ	Reliability	AVE
Equity			
Being treated fairly	0,925	0,923	0.857
Being treated right (justly and honestly)	0,926		
Emotional value			
Visiting the festival was pleasurable.	0,885		
Visiting the festival made me feel better.	0,812	0,879	0.707
The festival was a wonderful attraction that I enjoyed..	0,824		
Functional value			
Visiting the festival was affordable.	0,790		
The festival was economical.	0,786	0,890	0.668
The festival quality exceeded travel expense	0,856		
The festival offered better quality/more benefits.	0,836		
Musical qulity			
The concerts' sound quality	0,749		
The adaptation of the size of the concert halls	0,852		
This year's selection of artists	0,844	0,904	0.654
The concert program following announced time and venue	0,805		
The possibility of attending desired concerts/avoiding overlap.	0,787		
Satisfaction			
Overall, I am satisfied with this jazz festival	0,923		
As a whole, I am happy with this jazz festival.	0,934	0,948	0.860
I believe I did the right thing in attending this jazz festival	0,924		
Behavioural intention			
Likelihood of festival-goers returning to the jazz festival	0,876		
Likelihood to recommend the jazz festival	0,918	0,928	0.811
Probability that, in the same situation, the festival-goers would choose the same festival	0,907		

The reliability test gave results greater than 0.7 (between 0.786 and 0.934), an acceptable threshold according to Nunnally and Bernstein (1994), which confirms the reliability of the measurement scales used (Fornell and Larcker, 1981). Concerning the validity test, Bagozzi and Yi (1988) suggest that convergent validity is ensured by the λ above 0.7. Table 2 shows that all of the λ are above their recommendations. Furthermore, the average variance extracted (AVE) are greater than 0.5, which establish the convergent validity of the constructs (Fornell and Larcker, 1981). With regard to discriminant validity, it is established when the square root of the mean extracted variance (AVE) is greater than each of the correlations between constructs (Fornell and Larcker, 1981). The results in Table 3 show that the conditions for discriminant validity are met.

Table 2: Discriminant validity test

	1	2	3	5	5	6
Equity	0.925					
Behavioral intention	0.770	0.900				
Musical quality	0.783	0.747	0.808			
Satisfaction	0.826	0.778	0.826	0.927		
Emotional value	0.768	0.754	0.809	0.791	0.841	
Functional value	0.782	0.784	0.833	0.833	0.780	0.818

5.2 Structural model

To evaluate the structural model, the coefficient of determination (R2) of each dependent variable, the structural coefficients (β) and the level of significance (t-value) were examined. The values of R2 are above the recommended threshold of 0.10 (between 0.605 and 0.781) (Falk and Miller, 1992).

Table 3: Result of Structural Equation Model Estimates

Path from	Path to	Hypothesis	Structurel coef	t-value	p-value	Decision
Musical quality	Emotional value	H1	0.302	4.046	0.000	Accepted
Musical quality	Functional value	H2	0.354	4.537	0.000	Accepted
Musical quality	Satisfaction	H3	0.293	3.417	0.001	Accepted
Equity	Emotional value	H4	0.237	3.107	0.002	Accepted
Equity	Functional value	H5	0.212	2.374	0.018	Accepted
Equity	Satisfaction	H6	0.462	4.742	0.000	Accepted
Emotional value	Satisfaction	H7	0.518	6.267	0.000	Accepted
Functional value	Satisfaction	H8	0.565	7.669	0.000	Accepted
Emotional value	Intention	H9	0.352	3.871	0.000	Accepted
Functional value	Intention	H10	0.344	4.481	0.000	Accepted
Satisfaction	Intention	H11	0.778	20.230	0.000	Accepted

This study was initiated to examine the relationship between musical quality, equity, emotional value, utility value, satisfaction and intentions. Table 4 show that musical quality positively impacts emotional value, functional value and satisfaction ($\beta = 0.302$, $\rho < 0.005$. $\beta = 0.354$, $\rho < 0.005$. $\beta = 0.293$, $\rho < 0.005$). Therefore, H1, H2 and H3 are supported. Similarly, equity positively impacts emotional value, utility value and satisfaction ($\beta = 0.237$, $\rho < 0.005$. $\beta = 0.212$, $\rho < 0.05$. $\beta = 0.462$, $\rho < 0.000$). As a result, H4, H5 and H6 are supported. In addition, the emotional value positively impacts satisfaction and intention ($\beta = 0.518$, $\rho < 0.005$. $\beta = 0.352$, $\rho < 0.005$), which support H7 and H8. The same is true for the impact of utility value on satisfaction and intention ($\beta = 0.565$, $\rho < 0.005$. $\beta = 0.344$, $\rho < 0.005$). Therefore, H9 and H10 are confirmed. Finally, satisfaction positively impacts intention ($\beta = 0.778$, $\rho < 0.005$), which therefore support H11.

6. DISCUSSION AND CONCLUSION

This study contributes to the literature in several ways. Among other things, it makes it possible to test a model integrating equity, perceived quality, perceived value, as well as satisfaction and consumer behavioral intention. Indeed, no study has attempted to integrate these variables in the same model.

Firstly, equity has a positive impact on satisfaction. These results support the ideas of previous investigations (Rakotovao and Cliquet, 2018). From this perspective, the idea of equity as an antecedent to satisfaction is well established. Although the concept of equity is rarely investigated in the context of festivals, the results of our research confirm the importance of integrating this concept in such a context.

Second, the results of our research confirm the relationship between musical quality and satisfaction. The idea of satisfaction resulting from the confirmation of expectations supports the idea that perceived quality would be an antecedent of satisfaction. Indeed, satisfaction can be seen as an emotional response from a cognitive perspective following the quality of the service or product.

Although perceived value and satisfaction have been the subject of many investigations, the link between the two elements is not clear. Indeed, while investigations have confirmed the existence of a causal link between perceived value and satisfaction (Lee, Lee & Choi, 2011), others have suggested that it is satisfaction that impacts perceived value (Petrick & Backman, 2002a). In fact, if the client feels satisfied, there may be a halo effect on perceived value (Petrick and Backman, 2002a). The results of our research support the causal link between perceived value and satisfaction and corroborate other empirical findings that perceived value is an immediate antecedent to satisfaction. Furthermore, these results confirm the importance of using perceived value in predicting festival-goer satisfaction.

Third, just like satisfaction, perceived value also positively impacts consumers' behavioral intention. In the same way as the disconfirmation of expectations, perceived value is presented as a cognitive construct. According to this perspective, it would result from a cost-sacrifice comparison in the same way as disconfirmation, which is associated with expectations and perceived performance. However, beyond the traditional value-for-money paradigm, the concept of perceived value also has an emotional dimension. While functional value has a greater impact on satisfaction with emotional value, the reverse is true for the link between value and consumer behavioral intention.

Finally, the results of our investigation highlight the important role of satisfaction in the evaluation of the consumer's behavioral intention. A study on a relational point of view between the provider and the consumer requires the integration of the two constructs: satisfaction and perceived value. These two constructs are considered complementary. Indeed, satisfaction measures the level of what the provider currently offers on the market, as perceived by the customers. It refers to a tactical level that provides indications to improve current products and services. On the other hand, perceived value refers to the future directions of the company. It refers to a strategic level. From this perspective, it aims to assess how to create value for customers, how to better meet customer needs and how to attract potential customers. On this basis, the results of our research confirm the importance of satisfaction in any marketing decision.

In addition to theoretical impacts, our results also have implications for music festival organizers.

First, musical quality impacts on visitor satisfaction. Organizers should continue to invest in music quality. However, given that the perception of satisfaction has a greater impact on the future intention of the consumer than the quality of the music itself, strategies to improve visitor satisfaction should be pursued.

Second, consumers of cultural activities value the emotional dimension as much as the hedonic dimension of festivals. As a result, the cultural experience is unique, subjective and is linked to the moment and the emotion felt. As such, emotion is contagious because of an automatic, unintended, unrecognized tendency to imitate and synchronize facial expressions, body movements and vocalizations (Hatfield, Cacioppo & Rapson, 1994). When the same characteristics are synchronized with another individual, people may experience the same emotions. In addition, interpersonal connection plays an important role in the appreciation of a cultural festival. Music alone is not enough, it is also about socializing. The emotion that has the character of fostering social bonding will satisfy this need for socialization. Organizers must take into consideration both the important and contagious nature of emotion, which is an important lever to enhance the experience felt by festival-goers.

The use of sensory marketing in the context of festivals would be an interesting strategic axis for the organizers. For indoor concerts, it would be an idea to act on the olfactory atmosphere. In the context of distribution, a pleasant smell positively improves the perception of the products sold, therefore, the use of such techniques will certainly improve the perception of the musical performance. In addition, enjoyment of light influences the consumer's pleasure. In addition to sound, the lighting ambience at concerts must also be considered. It is worthwhile to use dynamic light animations that follow the rhythm and mood of the music, as in pop concerts.

The results confirm the multidimensional nature of the value. The understanding of the determinants of the perceived value must be approached from a functional and emotional perspective. This knowledge can be useful for organizers in designing and budgeting for their festivals. Attracting more visitor's means attracting renowned artists, but also investing in the atmosphere of the venues, lights, decorations, etc.

One of the limits of research is undoubtedly the measurement of emotional value. Indeed, the information was collected through paper questionnaires (and a pencil). Although many research studies use the same procedure to measure the concept, its relevance is puzzling. Moreover, emotion is a complex phenomenon to capture and can be camouflaged or simulated. Another limitation lies in our conception of satisfaction, which is purely cognitive. It would be just as interesting to investigate the emotional component of the construct.

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ARTICLE SCIENTIFIQUE N°13

LES DÉTERMINANTS ET LES CONSÉQUENCES DE LA SATISFACTION DES ÉTUDIANTS DANS LE CADRE DE L'ENSEIGNEMENT SUPÉRIEUR : CAS DES ÉTABLISSEMENTS PUBLICS D'ANTANANARIVO

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ATTESTATION DE PUBLICATION

Je soussigné, SOLOFOMIARANA RAPANOEL Bruno Allain, Professeur, Responsable éditorial du Cahier de Sciences Sociales, Mention Sociologie, Université d'Antananarivo, certifie par la présente que l'article ci-dessous :

- **Les déterminants et les conséquences de la satisfaction des étudiants dans le cadre de l'enseignement supérieur : cas des établissements publics d'Antananarivo** in Cahiers des Sciences Sociales N°4

est rédigé par Monsieur RAKOTOMAHENINA Pierre Benjamin, Maître de Conférences à la Faculté d'Economie, de Gestion et de Sociologie de l'Université d'Antananarivo et Monsieur RAKOTOVAO Finaritra Manovosoa, Maître de Conférences à l'Institut Supérieur de Technologie d'Antananarivo, et est prêt à être mis en ligne.

En foi de quoi, cette attestation a été délivrée à la demande de l'intéressée pour servir et valoir ce que de droit.

Fait à Antananarivo, le 16 DEC. 2020

Pour le Comité de Lecture

SOLOFOMIARANA RAPANOEL Bruno Allain
Professeur

LES DETERMINANTS ET LES CONSEQUENCES DE LA SATISFACTION DES ETUDIANTS DANS LE CADRE DE L'ENSEIGNEMENT SUPERIEUR : CAS DES ETABLISSEMENTS PUBLICS D'ANTANANARIVO

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Résumé
La satisfaction des étudiants relève d'une réelle importance dans le cadre de l'enseignement supérieur. En fait, non seulement, elle impacte sur les résultats de l'étudiant, mais constitue un avantage compétitif dans un environnement de concurrence accrue. Cependant, malgré son importance, la satisfaction des étudiants dans le champ de l'éducation supérieure n'a pas encore été pleinement étudiée. Cette étude tente de répondre à cet appel de recherche et se propose de tester le lien entre de qualité perçue, de satisfaction et de fidélité en intégrant la valeur partagée, l'image et la confiance dans un même modèle. L'étude a été menée auprès de l'Université d'Antananarivo et de l'Institut Supérieur de Technologie d'Antananarivo, sur 1000 étudiants. Dans un premier temps, les résultats indiquent qu'outre les aspects non-académiques, les dimensions de la qualité, ainsi que l'image impactent la satisfaction. Dans un second temps, la satisfaction, l'image et la valeur partagée influencent la confiance. En outre, la valeur partagée influence positivement l'image et la confiance. Enfin, il se trouve que la satisfaction, la valeur partagée et la confiance influencent la fidélité.
Mots clés : Qualité, satisfaction, image, valeur partagée, confiance, fidélité.

Abstract :
Student satisfaction is of real importance in higher education. In fact, not only does it impact student outcomes, but it constitutes a competitive advantage in an environment of heightened competition. However, despite its importance, student satisfaction in the field of higher education has not yet been fully investigated. This study attempts to respond to this call for research and aims to test the link between perceived quality, satisfaction and loyalty by integrating shared value, image and trust in the same model. The study was carried out at the University of Antananarivo and the Higher Institute of Technology of Antananarivo, on 1000 students. First, the results indicate that in addition to the non-academic aspects, the dimensions of quality, as well as the image impact satisfaction. Second, satisfaction, image and shared value influence trust. In addition, shared value positively influences image and trust. Finally, it turns out that satisfaction, shared value and trust influence loyalty.
Keywords: Quality, satisfaction, image, shared value, trust, loyalty.

1. **Introduction**

L'enseignement supérieur est incontestablement l'instrument le plus important au développement social et économique d'une nation (Weerasinghe, Lalitha, et Fernando, 2017). Afin d'atteindre ses principaux objectifs, la création et la diffusion des connaissances, les établissements reconnaissent et placent de plus en plus un accent plus important sur la satisfaction des attentes de leurs clients : les étudiants (Weerasinghe, Lalitha, et Fernando, 2017). En, réalité, l'importance de la satisfaction des étudiants réside dans le fait que non seulement elle impacte les résultats (Aldemir et Gülcan, 2004) mais la santé psychologique même des étudiants (Aldemir et Gülcan, 2004). La satisfaction influence sur la décision de poursuivre ou d'abandonner les cours ou même l'université (Kunanusorn et Puttawong, 2015). Cependant, en dépit du grand nombre de recherches consacré à la satisfaction, le champ de l'éducation supérieure n'a pas été pleinement étudié (Aldemir et Gülcan, 2004).

Quel que soit leur secteur d'activité, les organisations, accordent une réelle importance à la qualité des services. En effet, la qualité de service est une source d'avantage concurrentiel, d'attraction et de fidélisation des clients. De même, dans le contexte de l'enseignement supérieur, la mise à disposition de services de qualité est l'une des priorités les plus importantes des établissements d'enseignement du monde entier (Faizan et al. 2016).

Outre la satisfaction et la qualité perçue, la fidélité des consommateurs est un objectif stratégique pour toute organisation. En effet, il est plus souhaitable et moins coûteux de conserver les clients existants que d'attirer de nouveaux clients (Loureiro et González, 2008). Dans l'enseignement supérieur, il est nécessaire de développer une relation solide avec les étudiants qui, à terme, constituent la base financière des activités futures de l'établissement (Rojas-Méndez et al., 2009). Suivant cette perspective, la fidélisation des étudiants relève d'une importance stratégique du fait que : (1) la recherche de nouveaux étudiants est plus coûteuse que le maintien des étudiants existants et (2) l'enjeu de la fidélité des étudiants concerne aussi les étudiants ayant déjà obtenu leurs diplômes. En effet, les anciens étudiants continuent à soutenir leur ancien établissement non seulement par des bouches à oreilles positives, mais aussi par des contributions financières et des offres de travail aux nouveaux diplômés.

Bien que la qualité perçue, la satisfaction et la fidélité soient reconnues comme importantes, dans le cadre de l'enseignement supérieur, un modèle qui intégré simultanément ces trois concepts n'a pas encore été développé. L'objectif de la présente recherche est d'associer dans un même modèle la qualité perçue, la satisfaction, la valeur partagée, l'image, la confiance afin d'expliquer la satisfaction et la fidélité des étudiants. Sur le plan théorique, il s'agit de pallier les carences relatives révélées dans la littérature actuelle. Un constat que les recherches adoptant cette perspective sont trop peu nombreuses, amène à s'intéresser davantage au sujet. Sur le plan méthodologique, davantage d'investigations dans des terrains, telle l'éducation supérieure sont nécessaires pour asseoir la validité des recherches.

Le présent article est organisé en trois parties. Après la présentation du modèle conceptuel de recherche et les hypothèses qui en découlent, nous exposons la méthodologie et les résultats. Enfin, nous discutons les résultats de cette recherche.

2. **Proposition du modèle de recherche et génération des hypothèses**

Hormis la qualité perçue, la satisfaction et la fidélité, notre recherche intègre un ensemble de variables qui n'ont jamais été combinés dans les recherches précédentes. Ces variables sont : la valeur partagée et l'image, la confiance. Le modèle et l'interaction entre les éléments en question sont décrits dans les prochaines lignes.

Liens entre les dimensions de la qualité perçue et la satisfaction

La satisfaction des étudiants est une attitude à court terme résultant de l'expérience d'éducation reçue. L'importance de la satisfaction dans l'enseignement supérieur réside dans le fait qu'elle impacte sur la décision de poursuivre ou d'abandonner les cours ou même l'université (Kunanusorn et Puttawong, 2015). Par ailleurs, c'est le seul indicateur de performance de la qualité de service fourni par les établissements d'enseignement supérieur (Ali et al., 2016). Dans le cadre des services, le lien entre la qualité perçue et la satisfaction a fait l'objet de nombreuses investigations et trois idées fondamentales ressortent de ces études. Premièrement, la qualité perçue est présentée comme un antécédent à la satisfaction (Hutchinson, Lai et Wang, 2009). La seconde idée est que la satisfaction est un antécédent de la qualité perçue (Bitner, 1990). La dernière idée est qu'il n'existe pas de lien entre les deux éléments (Dabholkar, 1995). Dans l'enseignement supérieur, même s'il y a une certaine divergence sur les éléments qui composent la qualité perçue, bon nombre d'investigations soutiennent l'idée d'un lien entre les deux construits. Dans la présente recherche, nous opterons pour le lien causal entre qualité perçue-satisfaction. Sur ce, la qualité de l'enseignement est présentée suivant les cinq dimensions du modèle HEdPERF (Ali et al., 2016) : les aspects non-académiques, les aspects académiques, la réputation, les questions liées au programme et l'accès. Ces idées fondent les hypothèses suivantes.

H1a : Les aspects non-académiques ont un impact significatif sur la satisfaction des étudiants.

H1b : Les aspects académiques ont un impact significatif sur la satisfaction des étudiants.

H1c : La réputation a un impact significatif sur la satisfaction des étudiants.

H1d : Les questions liées au programme ont une incidence importante sur la satisfaction des étudiants.

H1e : L'accès a un impact significatif sur la satisfaction des étudiants

Liens entre l'image, la satisfaction, la confiance et la fidélité

Outre les dimensions de la qualité perçue, l'image est l'autre déterminant de la satisfaction de notre modèle. Dans la théorie des consommateurs, l'image précède l'évaluation des consommateurs (Beerli, Díaz et Pérez, 2002). Suivant cette perspective, elle a un effet de halo sur les clients (Andreassen et Lindestad, 1998). Dans l'enseignement supérieur, l'image de l'établissement est tout aussi importante pour les étudiants (Brown et Mazzarol, 2009). Par ailleurs, cette relation entre l'image et la satisfaction a été validée par d'autres investigations (Beerli, Díaz et Pérez, 2002).

Suivant d'autres idées, une image est un ensemble d'évaluations adjectivales spontanément associées à un stimulus donné, qui a auparavant déclenché un certain nombre d'associations chez les individus pour former un ensemble de croyances ou de stéréotypes (Kotler et Fox, 1995). En d'autres termes, il s'agit d'une somme de croyances, d'idées et d'impressions d'une personne sur un objet. Dans l'enseignement supérieur, l'image globale d'un établissement peut être appréhendée à partir des forces, des faiblesses et des impressions tirées de l'expérience avec l'établissement (Ivy, 2001). Sur ce, la confiance dans une relation peut être influencée par la perception qu'ont les intervenants de l'image de l'organisation (Schlesinger et al., 2016). En effet, la relation entre l'image et la confiance a été confirmée dans le cadre de l'éducation supérieure (Schlesinger et al., 2016). Outre le lien entre l'image et la confiance, des investigations empiriques montrent le lien entre l'image et la fidélité envers les établissements (Alves et Raposo 2007). Nous proposons donc les hypothèses suivantes :

H2 : L'image de l'établissement a un impact positif sur la satisfaction des étudiants.

H3 : L'image de l'établissement a un impact positif sur la confiance.

H4 : L'image de l'établissement a un impact positif sur la fidélité.

Liens entre la satisfaction, la confiance et la fidélité

Dans la littérature, la place de la confiance est reconnue dans l'établissement d'une relation à long terme. Concernant le lien entre la confiance et la satisfaction, les écrits sur le marketing relationnel avancent l'existence d'un lien entre les deux construits (Gurviez et Korchia, 2002). En effet, la satisfaction renforce au fil du temps la sûreté perçue de la firme et contribue à l'instauration de la confiance (Béjaoui et M'henna, 2010). Dans l'enseignement supérieur, il est aussi soutenu que la confiance des étudiants est liée à leurs satisfactions (Schlesinger et al., 2016). Par ailleurs, il y a un certain consensus sur la relation entre la satisfaction et la fidélité. En effet, l'un des déterminants les plus importants de la fidélité est sans doute la satisfaction (Ali et al., 2016). Ces propos soutiennent les hypothèses suivantes :

H5 : La satisfaction des étudiants impacte positivement leur confiance à l'égard de l'établissement.

H6 : La satisfaction a un impact positif sur la fidélité des étudiants.

Liens entre la valeur partagée, l'image, la confiance et la fidélité.

Dans le cadre de cette recherche, nous examinons aussi un autre élément : la valeur partagée. D'après Morgan et Hunt (994) la valeur partagée se réfère à la mesure dans laquelle les partenaires ont des croyances communes sur les comportements, les objectifs et les politiques qui sont importants ou insignifiants, appropriés ou inappropriés, et bons ou mauvais. Dans la théorie des consommateurs, cet élément est important dans l'établissement d'une relation entre l'acheteur et le vendeur. Avoir une valeur commune contribue au développement de l'engagement et de la confiance dans une relation (Schlesinger et al., 2016). En effet, la perception de valeurs similaires entre les partenaires accroît la capacité des partenaires à prédire le comportement et les objectifs de l'autre partie de l'échange, réduit les obstacles interpersonnels et, par conséquent, améliore la confiance entre les parties en question (Schlesinger et al., 2016). Ainsi, nous postulons :

H7 : La valeur partagée a un impact positif sur l'image de l'établissement.

H8 : La valeur partagée a un impact positif sur la confiance des étudiants.

H9 : La valeur partagée a un impact positif sur la fidélité des étudiants.
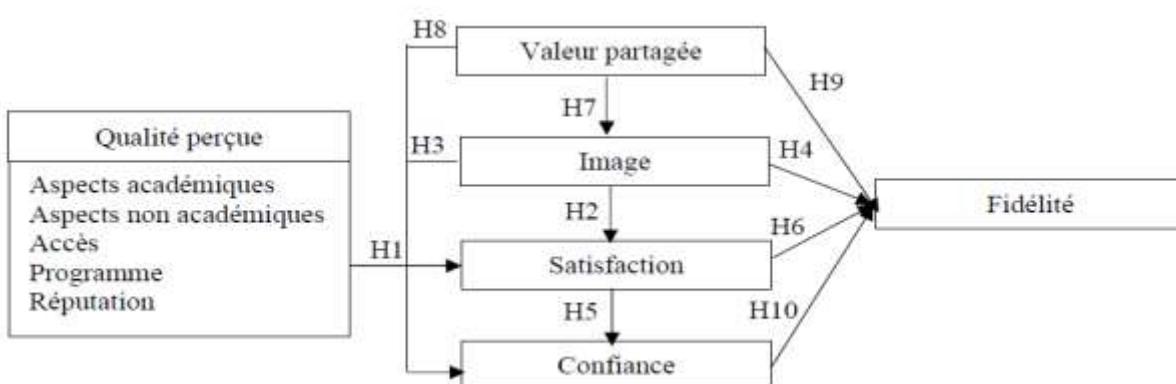
Lien entre la confiance et la fidélité

Concernant le lien entre la confiance et la fidélité, lorsque le prestataire agit de sorte à renforcer la confiance du consommateur, cela réduit le risque perçu vis-à-vis du prestataire et permet au consommateur de prévoir d'une manière fiable le comportement futur du prestataire (Sirdeshmukh et al., 2002). Ces idées fondent l'hypothèse suivante :

H10 : La confiance influence positivement la fidélité.

Le modèle global de recherche se présente comme suit :

Figure 1. Le modèle global de recherche

Méthodologie et données

Cette partie présente, dans un premier temps, les instruments de mesure pour chacun des construits. Dans un second temps, l'échantillonnage et le recueil des données, ainsi que la méthode d'analyse sont montrés.

Mesures

Les échelles de mesure mobilisées sont toutes issues de la littérature. Nous les avons adaptées suivant le contexte de l'étude. Les items pour les dimensions de la qualité et la satisfaction sont capturés par les items d'Ali et al. (2016). L'image, la valeur partagée, la confiance et la fidélité sont inspirées des travaux de Schlesinger et al. (2016). Le tableau 1 illustre les différentes définitions retenues pour chaque construit.

Tableau 1 : Définition des dimensions retenues

Construit	Définition	Références
Qualité perçue	Se réfère aux aspects académiques et non académiques, à l'accès, au programme et à la réputation de l'établissement	(Ali et al., 2016)
Satisfaction	Se rapporte à une attitude à court terme, au résultat de l'expérience des étudiants avec les services d'éducation reçus.	(Ali et al., 2016)
Image	Il s'agit d'une somme des croyances, des idées et des impressions des étudiants vis-à-vis de l'établissement.	(Schlesinger et al., 2016)
Valeur partagée	Se réfère à la mesure dans laquelle les partenaires ont des croyances communes sur les comportements, les objectifs et les politiques qui sont importants ou insignifiants, appropriés ou inappropriés, et bons ou mauvais.	(Schlesinger et al., 2016)
Confiance	Se réfère à la confiance d'une partie dans la fiabilité et l'intégrité d'un partenaire d'échange.	(Schlesinger et al., 2016)
Fidélité	Se réfère aux éléments cognitifs, affectifs et conatifs ressentis par les étudiants ainsi qu'aux décisions prises par ces derniers par rapport à la suite de leurs études.	(Schlesinger et al., 2016)

Echantillonnage et recueil des données

La recherche a été conduite auprès des étudiants de l'Université d'Antananarivo et de l'Institut Supérieur de Technologie d'Antananarivo. La collecte d'informations a été faite par questionnaire auprès de 1000 individus. Pour s'assurer la bonne fiabilité d'un modèle d'équations structurelles, selon Janssens et al. (2008) le nombre de réponses doit être 5 à 10 fois supérieur au nombre d'items. Dans cette recherche, l'échelle qui a le plus grand nombre d'items est l'échelle la qualité du son. Le nombre

minimum requis pour valider l'échelle est d'au moins 25 réponses, c'est-à-dire 5 fois les 5 items. Loehlin (2004), quant à lui, avance l'idée d'un échantillon de 100 à 200 individus, il conclut que le modèle se comporte correctement si la taille de l'échantillon respecte cette condition. Compte tenu de ces recommandations méthodologiques, des difficultés liées aussi bien à l'enquête qu'à la disponibilité des individus à questionner, et de la longueur de notre questionnaire, nous avons réalisé une enquête auprès de 1000 individus.

Analyse des données

Les données obtenues sont traitées avec le logiciel SmartPLS 3. D'abord, l'échelle de mesure a été testée, puis, une modélisation sous équation structurelle a permis de tester les hypothèses avancées.

3. Présentation des résultats

Après la présentation des tests de fiabilité et de validité des échelles de mesure, cette section aborde les résultats du test du modèle structurel.

Test de l'échelle de mesure

Avant le test du modèle structurel, il y a lieu d'établir la fiabilité, la validité convergente et discriminante des construits.

Tableau 2 : Présentation des échelles de mesures

Construit/mesure	λ	Fiabilité	AVE
Aspects académiques			
Les enseignants ont les connaissances nécessaires pour répondre à mes questions concernant le contenu du cours.	0.740		
Les enseignants font preuve de courtoisie.	0.801		
Quand j'ai un problème, les enseignants montrent un intérêt sincère à le résoudre.	0.811		
Les enseignants font preuve d'une attitude positive à l'égard des étudiants.	0.732	0.900	0.601
Les enseignants communiquent bien en classe.	0.816		
Les enseignants sont hautement qualifiés dans leur domaine respectif.	0.746		
Aspects non académiques			
Lorsque j'ai un problème, le personnel administratif montre un intérêt sincère à le résoudre.	0.837		
Le personnel administratif fournit une attention particulière.	0.902		
Les demandes de renseignements sont traitées efficacement.	0.901		
Les bureaux administratifs tiennent des dossiers précis et récupérables.	0.917		
Le personnel administratif fait preuve d'une attitude de travail positive à l'égard des étudiants.	0.872	0.964	0.770
Le personnel administratif communique bien avec les étudiants.	0.885		
Le personnel administratif a une bonne connaissance du système administratif.	0.862		
Les étudiants sont traités sur un pied d'égalité par le personnel.	0.839		
Accessibilité			
Le personnel académique est disposé à répondre à ma demande d'aide.	0.811		
Le personnel académique alloue suffisamment de temps pour les consultations.	0.859	0.905	0.704

Le personnel académique s'assure qu'il est facilement joignable.	0.797		
Le personnel académique est compétent pour répondre à ma demande.	0.886		
Questions relatives au programme			
L'université offre des programmes d'excellente qualité.	0.914		
L'université offre un large éventail de programmes avec diverses spécialisations.	0.880	0.921	0.795
L'université offre un excellent service de consultation.	0.882		
Réputation			
L'université a une image professionnelle.	0.877		
Le programme d'études de l'université est réputé.	0.778	0.890	0.672
Les diplômés de l'université trouvent facilement du travail.	0.903		
L'université a une bonne image.	0.706		
Satisfaction			
Je suis satisfait de ma décision de m'inscrire à cette université.	0.888		
Mon choix de choisir cette université a été un choix judicieux.	0.803		
Je pense que j'ai fait ce qu'il fallait quand j'ai choisi d'étudier dans cette université.	0.884	0.936	0.746
J'ai l'impression que mon expérience avec cette université a été agréable.	0.825		
Dans l'ensemble, je suis satisfait de cette université.	0.915		
Fidélité			
Je continuerai dans la même université si je voulais commencer un nouveau cours.	0.915		
Je continuerai dans la même université si je voulais poursuivre mes études.	0.890	0.918	0.788
Je recommanderai cette université à mes amis et à ma famille.	0.857		
Valeurs partagées			
Les valeurs reflétées par cette université sont cohérentes avec mes propres valeurs personnelles.	0.934		
Les valeurs reflétées par cette université reflètent le genre de personne que je suis.	0.910	0.962	0.865
Les valeurs reflétées par cette université sont compatibles avec les choses que je pense.	0.957		
Les valeurs reflétées par cette université sont similaires à mes valeurs.	0.917		
Confiance			
Je perçois cette université comme une institution sincère et honnête.	0.906		
Cette université a une grande intégrité. (moralité / honnêteté)	0.936	0.959	0.854
On peut compter sur cette université.	0.932		
On peut s'attendre à ce que cette université agisse correctement.	0.922		
Image			
J'ai toujours eu une bonne impression de cette université.	0.956		
À mon avis, cette université a une bonne image dans l'esprit des consommateurs.	0.921	0.956	0.879
Dans l'ensemble, j'ai une image positive de cette université.	0.934		

Le test de fiabilité a avancé des résultats supérieurs à 0.7 (entre 0.890 et 0.964), seuil acceptable selon Nunnally et Bernstein (1994) ce qui confirme la fiabilité des échelles de mesures utilisées (Fornell et Larcker, 1981). Concernant le test de validité, Bagozzi et Yi (1988) suggèrent que la validité convergente est assurée par les λ supérieurs à 0.7. Le tableau 2 montre que tous les λ sont supérieurs à leurs recommandations. Par ailleurs, les variances moyennes extraites (AVE) sont supérieures à 0.5, ce qui permet d'établir la validité convergente des construits (Fornell et Larcker, 1981). Concernant la validité discriminante, elle est établie lorsque la racine carrée de la variance extraite moyenne (AVE) est supérieure à chacune des corrélations entre construits (Fornell et Larcker, 1981). Les résultats du tableau 3 montrent que les conditions de validité discriminante sont remplies.

Tableau 3 : Corrélation entre les différents construits

	1	2	3	4	5	6	7	8
Aspects académiques	0.877							
Aspects non académiques	0.514	0.775						
Accessibilité	0.543	0.529	0.839					
Confiance	0.463	0.599	0.549	0.924				
Fidélité	0.532	0.687	0.486	0.714	0.888			
Image	0.545	0.658	0.582	0.772	0.789	0.937		
Programme	0.542	0.704	0.580	0.609	0.778	0.693	0.892	
Réputation	0.421	0.568	0.420	0.601	0.732	0.647	0.704	0.820
Satisfaction	0.513	0.683	0.563	0.731	0.807	0.829	0.747	0.756
Valeurs partagées	0.458	0.612	0.515	0.624	0.708	0.666	0.675	0.652

Test du modèle structurel

Pour évaluer le modèle structurel, le coefficient de détermination (R^2) de chaque variable dépendante, les coefficients structurels (β) et le niveau de significativité (t-value) ont été examinés. Les valeurs de R^2 sont supérieures au seuil recommandé 0.10 (entre 0.444 à 0.633) (Falk et Miller, 1992).

Figure 2 : Le modèle structurel
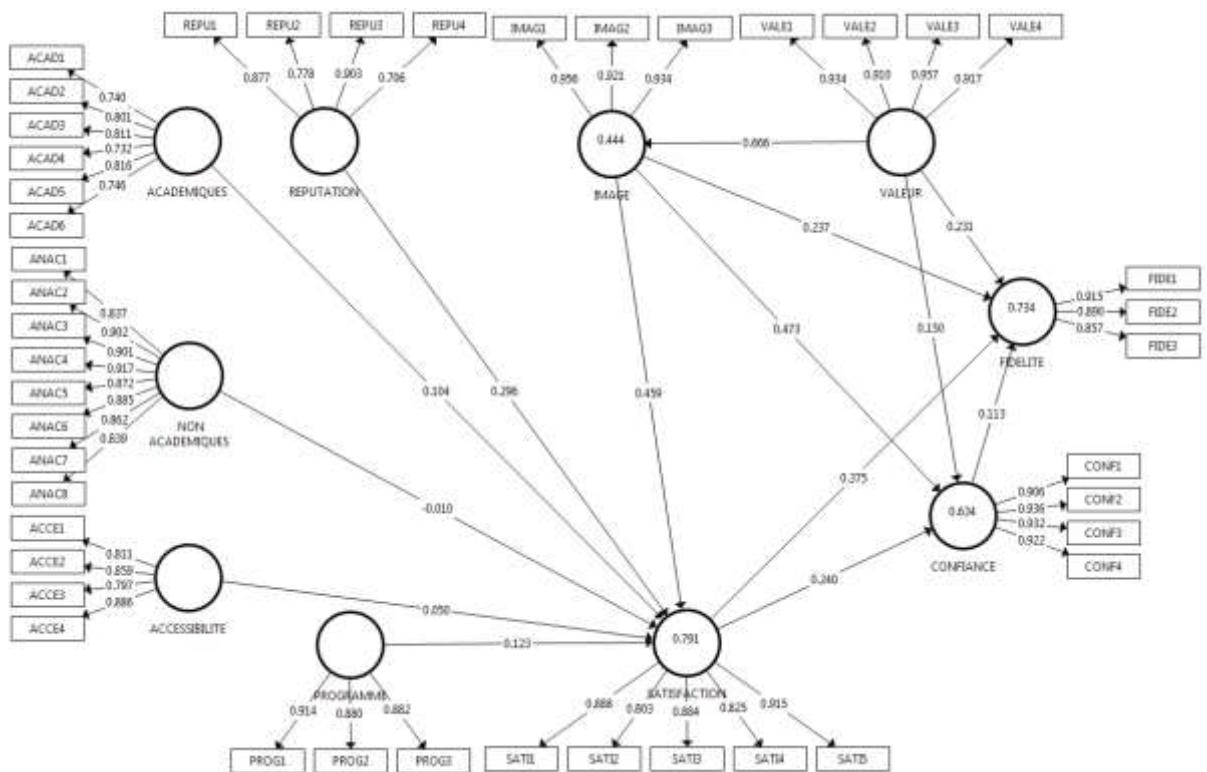
Tableau 4 : Résultat des estimations du modèle d'équations structurelles

Lien	Hypothèse	Coef structurel	t-value	Valeurs-p	Résultat
Non académiques -> Satisfaction	H1a	-0.010	0.452	0.652	Non confirmée
Académiques -> Satisfaction	H1b	0.104	4.498	0.000	Confirmé
Réputation -> Satisfaction	H1c	0.296	10.559	0.000	Confirmé
Programme -> Satisfaction	H1d	0.123	3.624	0.000	Confirmé
Accessibilité -> Satisfaction	H1e	0.050	2.244	0.025	Confirmé
Image -> Satisfaction	H2	0.459	16.780	0.000	Confirmé
Image -> Confiance	H3	0.473	10.624	0.000	Confirmé
Image -> Fidélité	H4	0.237	5.592	0.000	Confirmé
Satisfaction -> Confiance	H5	0.240	6.024	0.000	Confirmé
Satisfaction -> Fidélité	H6	0.375	9.497	0.000	Confirmé
Valeur -> Image	H7	0.666	34.518	0.000	Confirmé
Valeur -> Confiance	H8	0.150	3.930	0.000	Confirmé
Valeur -> Fidélité	H9	0.231	6.717	0.000	Confirmé
Confiance -> Fidélité	H10	0.113	3.078	0.002	Confirmé

Cette étude a été initiée pour examiner la relation entre la qualité, la satisfaction, la valeur partagée, l'image, la confiance et la fidélité dans le cadre de l'enseignement supérieur. Les résultats du tableau 4 montrent que parmi les dimensions de la qualité perçue, l'aspect académique, la réputation, le programme et l'accessibilité impactent la satisfaction ($\beta = 0.104$, $\rho < 0.005$; $\beta = 0.296$, $\rho < 0.005$; $\beta = 0.123$, $\rho < 0.005$; $\beta = 0.50$, $\rho < 0.05$). Par conséquent, H1b, H1c, H1d et H1e sont confirmées. Cependant, le lien entre les aspects non académiques et la satisfaction n'est pas confirmé (H1a). De même,

l'image impacte sur la satisfaction, la confiance et la fidélité ($\beta = 0.459$, $\rho <0.005$, $\beta = 0.473$; $\rho <0.005$; $\beta = 0.237$, $\rho <0.005$). Il en résulte que H2, H3 et H4 sont confirmées. En outre, la satisfaction impacte positivement sur la confiance et sur la fidélité ($\beta = 0.240$, $\rho <0.005$; $\beta = 0.375$, $\rho <0.005$) ce qui confirme H5 et H6. Par ailleurs, il est aussi confirmé que la valeur partagée impacte sur l'image ($\beta = 0.666$, $\rho <0.005$), la confiance ($\beta = 0.150$, $\rho <0.005$) et la fidélité ($\beta = 0.231$, $\rho <0.005$). Sur ce, H7, H8et H9 sont confirmées. Enfin, la confiance impacte positivement la fidélité ($\beta = 0. 113$, $\rho <0.005$) ce qui, par conséquent, confirme H13.

Discussion et conclusion

Cette recherche propose de tester un modèle de satisfaction et de fidélité intégrant à la fois la qualité perçue, la valeur partagée, l'image et la confiance.

Premièrement, Concernant la relation entre la qualité et la satisfaction, les résultats ont mis en exergue que hormis les aspects non académiques, les dimensions de la qualité perçue impactent positivement la satisfaction des étudiants. Ces résultats confirment en partie ceux trouvés par (Faizan et al. 2016) qui concluent que l'ensemble des dimensions de la qualité perçue influence la satisfaction des étudiants. En investissant dans leurs études supérieures, les étudiants opèrent une comparaison des « valeurs de connaissance » à espérer des fournisseurs de services d'enseignement. Les étudiants s'attendent à une valeur maximale pour chaque unité investie (Sharabi, 2013). Il est ainsi important pour un établissement supérieur public de s'impliquer dans les différentes dimensions de la qualité pour continuer à attirer les meilleurs profils d'étudiants.

Deuxièmement, les résultats montrent clairement que la réputation explique la satisfaction des étudiants plus que les autres dimensions. En effet, il y a une certaine idée que plus l'établissement dégage une bonne réputation, plus les étudiants sortants auront moins de problèmes à trouver du travail. Outre la réputation, le programme proposé par l'établissement est tout aussi important pour les étudiants. En effet, selon les étudiants, une fois dans le monde du travail, leurs performances dépendent en grande partie du contenu offert par les établissements d'enseignement supérieur. Par ailleurs, la relation avec les enseignants revêt aussi une importance particulière. Sur ce, une attention particulière pourrait être alors accordée au recrutement, à la motivation et au maintien en poste d'enseignant de grande qualité.

Troisièmement, les résultats impliquent que l'image constitue un facteur principal de la satisfaction des diplômés de l'établissement. Ces implications corroborent les recherches antérieures (Brown et Mazzarol (2009). Ainsi, mesurer et comprendre l'image de l'établissement pourraient être une étape importante pour un établissement d'enseignement supérieur pour concevoir des stratégies institutionnelles afin d'agir positivement sur la fidélité des étudiants. Les établissements avec des images positives seront mieux positionnés pour favoriser la satisfaction des diplômés. Il serait ainsi avantageux pour l'établissement de véhiculer une image de marque à travers les différentes campagnes de communication.

Quatrièmement, les résultats confirment que la satisfaction des diplômés est l'antécédent le plus important de la fidélité. Ainsi, les universités devraient s'efforcer d'augmenter leur satisfaction afin de bénéficier des impacts positifs sur la fidélité des étudiants. En effet, la fidélité des étudiants offre de nombreux avantages pour l'établissement d'enseignement supérieur. Ces avantages peuvent perdurer longtemps après l'obtention du diplôme. Les anciens peuvent fournir des ressources financières supplémentaires, personnellement ou à partir de leurs organisations, par des dons ou par le financement de projets de recherche (Henning-Thurau, Langer et Hansen 2001). Ceux qui sont en bonne position pour le faire peuvent également embaucher les nouveaux

sortants, ou encore développer des liens de coopération « université-entreprise » (Frasquet, Calderon et Cervera 2012). En outre, les anciens peuvent contribuer à améliorer ou à promouvoir l'image et la réputation de l'université (Nguyen et Leblanc, 2001) par des bouches à oreille positives.

Cinquièmement, bien qu'avec un effet moindre que celle rapportée dans des recherches antérieures (Henning-Thurau, Langer et Hansen, 2001), il est confirmé que la confiance est un antécédent de fidélité. La confiance dans une organisation provient des expériences positives des clients qui les incitent à poursuivre la relation (Vesel et Zabkar 2010). Ainsi, les diplômés du cycle inférieur qui font confiance à leurs institutions seront plus enclins à y poursuivre leurs études, et recommanderont l'établissement à des connaissances. Les résultats montrent que la satisfaction des diplômés impacte sur leur confiance vis-à-vis de l'université. Par conséquent, garantir des services de qualité permet aux établissements de paraître fiables et honnêtes aux yeux de ses étudiants.

Enfin, les résultats montrent que la valeur partagée influence la confiance, l'image et la fidélité. Ces résultats confirment ceux trouvés par d'autres investigations (Adidam, Bingi et Sindhav 2004). En effet, le fait d'adopter et de partager les valeurs reflétées par l'institution rend l'étudiant plus susceptible de s'engager dans une relation durable avec cette institution. Par ailleurs, partager (ou avoir la perception de partager) un sentiment de communauté avec une entité impacte sur les croyances ou les idées qu'on se fait sur cette entité, notamment sur la fiabilité et l'intégrité de cette dernière.

Une limite importante de cette étude est que la taille de son échantillon est assez restreinte et peut ne pas être représentative de tous les étudiants malgaches. La prudence est ainsi de mise si des généralisations doivent être faites. La deuxième limite est la probabilité d'omettre des facteurs importants dans le cadre conceptuel qui aurait pu expliquer la satisfaction dans la mesure où les différentes dimensions ont été retirées des littératures déjà existantes. La troisième limite porte sur la restriction de l'éducation en tant que simple « service », or l'enseignement ne peut être appréhendé ni comme un produit ni comme un service comme les autres, car, dans ce domaine à forte intensité de connaissance, il y a co-production active entre l'enseignant et l'étudiant.

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ARTICLE SCIENTIFIQUE N°14

TRADITIONAL TRADE VS. E-COMMERCE: DOES PRODUCT QUALITY HAVE THE SAME VALUE? A CASE STUDY OF THE CITY OF ANTANANARIVO, MADAGASCAR

Jeetendra Ahirwar, New Delhi, India

Résumé l'article n°14 :

COMMERCE DIRECT ET COMMERCE EN LIGNE, LA QUALITE DES PRODUITS A-T-ELLE LA MEME VALEUR ? CAS DE LA VILLE D'ANTANANARIVO, MADAGASCAR

La mondialisation a provoqué une évolution rapide du commerce dans tous les pays, y compris ceux en voie de développement comme Madagascar. Cela se manifeste par l'apparition de nouveaux canaux de distribution, plus accessibles et plus rapides avec le développement de l'internet. Pour satisfaire leurs besoins, les consommateurs ont maintenant un large choix, en rapport avec leur convenance. De leur côté, les vendeurs tentent de se rapprocher davantage des consommateurs en utilisant différents canaux. Les caractéristiques des transactions commerciales en ligne et des transactions commerciales directes sont différentes et peuvent ne pas correspondre aux réelles attentes des consommateurs. En effet, les réseaux sociaux à Madagascar ont connu un essor significatif qu'à partir des années 2010, ce changement pourrait bouleverser les habitudes des consommateurs. Par ailleurs, la perception de la qualité pourrait ne pas être la même pour les deux cas. Cette étude a pour objet de comparer la perception de la qualité des produits issus de ces deux canaux afin d'évaluer la satisfaction des consommateurs. Des enquêtes ont été menées auprès de 85 personnes de CSP différentes, qui inclue des étudiants, des salariés du secteur privé, des fonctionnaires, des chômeurs, des professionnels libres et des personnes au foyer. Des analyses multivariées permettent de voir les liens entre les attentes de chaque CSP et les canaux utilisés. Les résultats montrent la disparité des besoins et attentes de chaque catégorie de consommateurs suivant chaque mode d'opération commerciale.

Mots clés : Satisfaction, marketing, e-commerce, consommateur, besoin

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TRADITIONAL TRADE VS. E-COMMERCE: DOES PRODUCT QUALITY HAVE THE SAME VALUE? A CASE STUDY OF THE CITY OF ANTANANARIVO, MADAGASCAR

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ABSTRACT

Globalization has caused a rapid evolution of commerce in all countries, including developing countries like Madagascar. This is reflected in the emergence of new, more accessible and faster distribution channels with the development of the Internet. Today, customers have a wider choice of products to satisfy their needs and personal convenience. To get closer to customers, traders resort to a range of sales channels. Online and traditional commercial transactions have distinct features which may not match up with customers' real expectations. Indeed, social networks have grown rapidly in Madagascar since 2010 and have brought about a change that could disrupt customers' habits. Moreover, the perception of quality might not be the same in each case. This study is intended to compare the perception of product quality from these two channels in order to assess customer satisfaction. The survey was conducted among a sample of 85 people from different socio-professional categories (SPCs), including students, employees, functionaries, unemployed, liberal professionals and stay-at-home persons. Multivariate analyses show the relationships between the expectations of each SPC and the channels used. The results highlight the mismatch between the needs and expectations of each category of customers according to the mode of business operation.

1. INTRODUCTION

New Information and Communication Technologies (NICTs) are increasingly affecting business operations, as with the emergence of e-commerce. In Madagascar, online commerce still has a long way to go if we refer to dedicated websites. Rather than rushing Malagasy costumers, these sites have opted for a halfway solution between e-commerce and direct trade. According to UNCTAD's 2017 Information Economy Report, most African countries

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including Madagascar are not ready for e-commerce yet. UNCTAD's index helps countries understand their strengths and weaknesses. African countries still suffer from low Internet penetration rate, however profit margins are huge and Africa can take advantage of the opportunities offered by e-commerce. UNCTAD Secretary-General Mukhista Kituya stated: *"As the digital economy expands and more business activities are affected, it becomes more important for governments to consider policies that can help to harness e-commerce for sustainable development."*

The Internet has revolutionized the world of commerce through the creation of e-commerce or electronic commerce. In the 1970's, e-commerce consisted only of electronic transactions and computerized data exchanges between companies. It was only in the 1980's, with the proliferation of credit cards and automated teller machines (ATMs), that the electronic payment system gradually appeared on websites.

In Antananarivo, the capital of Madagascar, social networks are widely used by various trader categories, and the city has become embroiled in a battle between different methods of purchasing and distribution. While one in ten persons declared to have made at least one online purchase in 2017, the number grew to one in three persons in 2018 (35 percent increase). Nevertheless, despite the benefits of online commercial transactions, many people prefer to adopt the traditional direct purchase method. One question stimulates a debate: are quality expectations the same for online and traditional commerce? This question led us to set the objective of identifying the levels of perception of the products offered by these two distribution channels.

The following assumption was put forward: direct commerce is valued more highly than online commerce because of the quality of the product offered. On one hand, in direct trade, the product quality is perceived physically through direct observation by the customer. On the other hand, online trade involves the risk of non-matching between the product displayed on the website and the product actually delivered.

2. THEORICAL AND CONCEPTUAL FRAMEWORK

2.1. QUALITY OF A PRODUCT OR A SERVICE

Various organizations and experts have attempted to define "quality". The concept of quality is difficult to define and can be very subjective. According to ISO 9000, quality is the ability of a product or service to satisfy stated needs. As such, one can say that a good or a service has good quality only when it satisfies the requirements specified by the client. Moreover, the satisfaction of such requirements involves precision, leaving no room for approximation. Expectations about a product or service are based on reliability, durability, compliance with standards and performance.

According to AFNOR, a quality product or service is a product whose characteristics allow it to satisfy the *stated or implicit needs of customers*. Quality is therefore a relative concept based on needs. Quality is a basic concept that the public perceives more and more in a sensory and affective relation to the object, but which also relates to rational judgment; the notion of quality is inseparable from the qualities of the product (Giordano, 2006)

Today's traditional trade uses business practices that involves critical contact between the customer and the seller. In addition to the use of tools (computer, management software...), jobs related to this method of trade first and foremost require relational skills and a good knowledge of the products. Customers have become increasingly demanding in terms of service quality, sedentary salesman's advice (in store) and product quality.

E-commerce does not involve direct contact with the customer. Despite transaction speed and accessibility, the success of online transactions is based more on trust, given the risks that could occur. Trust building is based on three criteria: integrity, capacity and goodwill (Lee and Turban, 2001). Building trust provides customers with a sense of assurance that reduces risks and vulnerabilities including their own security and an invasion to their privacy during transactions (Beldad *et al.*, 2010).

2.2. MULTICHANNEL MARKETING AND CUSTOMER RETENTION

The multi-channel marketing environment has become more widespread in recent years. A marketing strategy that uses multiple channels has become an important tool to motivate customers to shop more frequently while improving the interaction between sellers and buyers towards a sustainable relationship (Hansotia and Rukstales, 2002; Rangaswamy and Van Bruggen, 2005).

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In addition, firms are trying to implement strategies to increase customer retetion and avoid customer churn, as the costs of customer acquisition are much higher than that of retention. An additional effort in terms of customer retention is thus more profitable for firms (Pfeifer and Farris, 2004; Reichheld and Sasser, 1990; Gupta and Lehmann, 2003).

2.3. SOCIAL NETWORKING AND CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Social media networking has emerged as a revolution in the digital age in recent decades, with major mpacts on the business world. Researchers have identified several benefits from social media, including facilitating the emergence of creative online users for content creation, interaction, and interoperability (Berthon *et al.*, 2012). The fundamental nature of social media as a platform for customers to interact with and influence one another has a more direct impact on brand communities, and it produces higher response rates and greater customer engagement than traditional marketing methodologies that focus only on firm-consumer relationship (Trusov *et al.*, 2009).

Social media applications are also transforming the role of online users from passive consumers of information to active participants in creating and sharing information with one another: videos, stories, photos (Lenhart *et al.*, 2010). In addition to facilitating interpersonal communications, social media have enabled customers to interact with business organizations and have empowered them to take an active role in the search for creativity (Prahalad and Ramaswamy 2004). Currently, managers are integrating social media applications into customer relationship management (CRM) systems to develop new capabilities that improve customer experience and satisfaction (Trainor *et al.*, 2014). This merger of existing CRM systems with social media has extended the concept of CRM to incorporate a more collaborative, interactive, and network-focused approach to managing customer relationships (Trainor *et al.*, 2014). The recently coined term "Social Customer Relationship Management" or Social CRM describes this new CRM system (Greenberg, 2010). Marketing scholars define social CRM as "the integration of customer-focused activities, including processes, systems, and technologies, with emergent social media applications to engage customers in collaborative conversations and enhance customer relationships" (Trainor, 2012). Many organizations and firms have recognized the importance and the potential of social CRM and have made considerable investments in the system. Researchers have shown that CRM technologies alone rarely add value and are most effective when combined with other firm resources (Chang *et al.*, 2010; Jayachandran *et al.*, 2005; Srinivasan *et al.*, 2005; Trainor *et al.*, 2014).

3. METHODOLOGY

3.1. STRUCTURED INTERVIEW

Exploratory interviews have been carried out at the beginning of the survey to determine the study population. Semi-directive interviews were conducted with vendors, customers, consultants and other NTICs experts. Discussions with these people and observations have guided the selection of population categories to be surveyed.

Subsequently, structured interviews were conducted in a few locations within the city of Antananarivo in accordance with the guidelines for exploratory interviews. During these interviews, the interviewer asked questions according to a strict predefined protocol (the objective was to avoid that the interviewee goes beyond the questions asked and the scope defined). Interviews were conducted in several highly populated locations in the city of Antananarivo, including Antanimena, Ampefiloha, 67ha, Alarobia, Ankazomanga, and Ankatso, to achieve significant diversification of the responses. Structured interviews present the advantage of minimizing misunderstanding by the interviewee and focusing the survey.

3.2. SAMPLING AND DATA COLLECTION

Once the characteristics of individuals have been determined based on the interviews, the next step is to calculate the sample study. The basic sample size calculated using sampling formula ($n = [z^2\, p\, (1-p)] / [e^2]$) is 385 people. However, given the homogeneity of some groups according to the experts interviewed earlier, the number was adjusted downwards. The purposive sampling method was used to select the respondents. Consequently, the number of respondents, taking into account the interviews carried out, was 85 people.

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3.3. DATA PROCESSING

The first step in testing the hypothesis is to identify SPCs in order to determine their proportions. The next step is to determine the characteristics of each SPC according to a number of criteria.

3.4. MOTIVES ASSOCIATED WITH EACH PURCHASING METHOD

Through the surveys we have conducted, the research is based on determining the proportions of each of the motives behind customers' choice. The most likely motives for choosing a purchasing method identified through observation are presented in the form of a predefined list to customers. First, in the case of direct purchasing, the list of motives includes the following: transparency of the offer, product quality, and price, interaction between the customer and the seller, and the lack of access to the Internet. Second, in the case of online purchase, the list includes originality, lack of time, product quality, price and accessibility.

3.5. DETERMINATION OF PREFERENCES ACCORDING TO THE SPC FOR EACH PURCHASING METHOD

Each SPC has a different lifestyle. Therefore, the motives of these groups of people could vary according to the purchasing method. This information will help situate each purchasing method and identify the reasons that foster its adoption.

The variables to be manipulated in this analysis include SPCs and the motives for selecting a purchasing method. The purpose of the study to establish the relationship between satisfaction levels, the product purchasing method and their respective SPCs, which are all qualitative variables. The appropriate statistical analysis tool is a multivariate analysis, considering these types of variables. The Multiple Correspondence Factor Analysis (MCA) was therefore applied. The results presented are in the form of a two-dimensional symmetrical graph presenting the two factoral axis that contain the most relevant information on the studied phenomenon.

3.6. IDENTIFICATION OF CHARACTERISTIC TYPES OF GOODS

Beyond preferences, it is important to identify the types of goods that are most characteristic of each SPC and for each purchasing method. This approach presents the advantage of determining the most popular items for each SPC as well as their purchasing habits.

The variables to be manipulated in this step are: SPC, type, frequency of purchase, and types of goods purchased. Since these variables are qualitative in nature and the relationship between them need to be established, the most appropriate analysis tool is the Multiple Correspondence Factor Analysis (MCA). The results are presented as a two-dimensional representation of the two factoral axes.

4. RESULTS AND DISCUSSIONS

4.1. DESCRIPTION OF RESPONDENTS BY SPCs

Figure 1 provides a snapshot of the characteristics of respondents. The percentage is also provided for each SPC.

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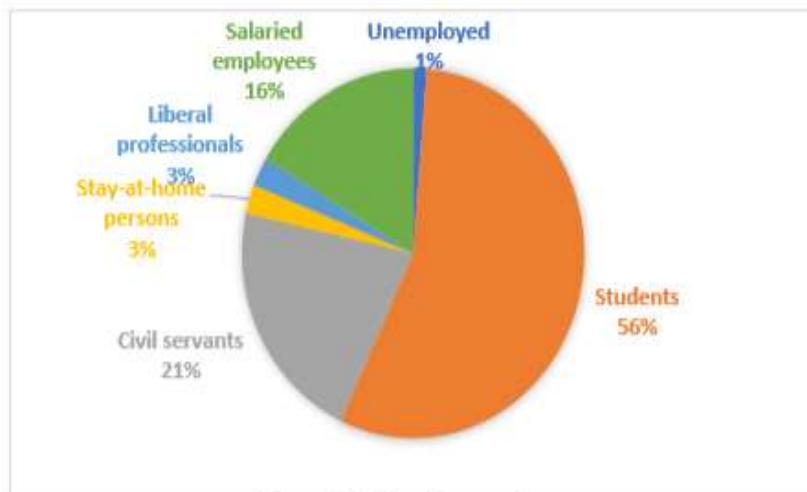
Figure 1: SPCs of respondents

The selection of SPCs is based on a grouping of the population into homogeneous sections for the most frequently observed activities. These activities are part of the customers' daily lives. In other words, customers must belong to one of the SPCs identified. In our study, students account for more than half of respondents (56 percent), followed by employees (37 percent) formed by civil servants (21 percent) and private sector employees (16 percent), in second and third place respectively. Liberal professionals and the unemployed represent only 7 percent of respondents.

4.2. DIRECT OR TRADITIONAL PURCHASING METHOD

The evolution of technology continues to have an enormous impact in the world of commerce, including on customers' purchasing behavior. Given the plurality of needs to be satisfied, it is appropriate to focus only on the criteria for selecting this purchasing method and on identifying the categories of goods that promote such practice.

4.3. REASONS FOR TRADITIONAL PURCHASING METHOD

There are several reasons why customers continue to practice the traditional purchasing method even though technology offers multiple options for acquiring a good. The figure below shows the main reasons that justify customers' choices.
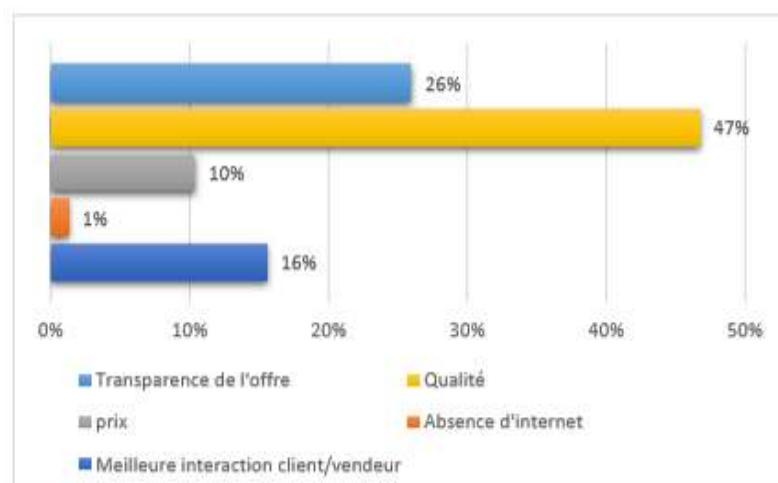
Figure 2: Primary reasons for traditional purchasing method

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Being able to directly observe the quality of the product and/or service is the main reason for almost half of the respondents (47 percent). The second most important reason is product assurance through the transparency of the offer (26 percent). A good client/seller interaction, price and the lack of access to the Internet account for 10 percent, 16 percent and 1 percent respectively, i.e. almost a quarter of respondents.

4.4. PREFERENCES FOR TRADITIONAL PURCHASING METHOD BY SPC

Each SPC has its preferences about the choice of the purchasing method. These preferences may include product quality, offer transparency, negotiable price, buyer/seller interaction, or simply a lack of access to the Internet. Figure 3 shows the primary reasons for such choices.
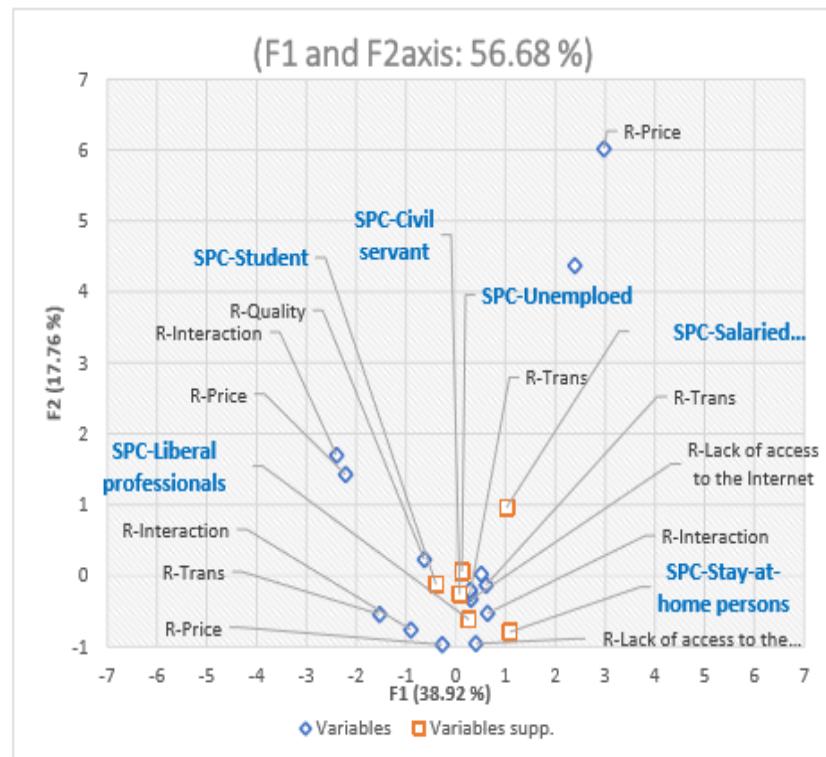
Figure 1: Reasons to opt for direct purchasing, by SCP

Caption
R-Trans: Offer transparency

This graphical representation shows only 56.68 percent of the information on the studied phenomenon, and focuses mainly on the factoral axis F1 with 38.92 percent. This figure shows that the behavior of the different SPCs is homogeneous since they are in the same position. In other words, each SPC has no specific reason of its own to adopt the traditional purchasing methods. However, it should be pointed out that the SPC-Salaried employees, i.e. private sector employees, behave differently from the other SPCs.

4.5. TYPE OF GOODS FOR DIRECT PURCHASING

Through a direct contact with the seller and the product, a wide range of choices is available to the customer. At this stage, SPCs most typical to the study for which complete data are available include students, salaried employees, and civil servants. The main categories of goods purchased include clothing or footwear, Hi-Tech products (telephone, computer), cosmetics, and furniture. In addition, the frequency of purchase of such goods can be either

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spontaneous, need-based, rarely or several times a month. To illustrate the patterns of direct purchasing, Figure 4 presents the main product categories most often purchased by customers based on their purchasing habits and according to their SPCs.
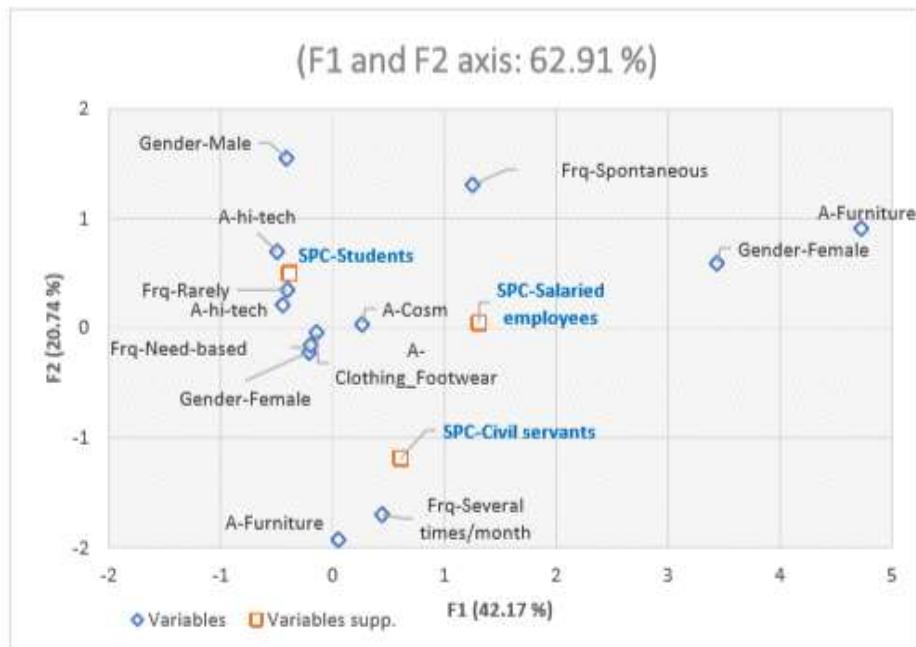

Figure 2: Categories of goods for direct purchasing by SPCs

Caption
A-Cosm: Cosmetic products
Cloth_Footwear: Clothing and Footwear

The two-dimensional Figure 4 shows 63 percent of the studied phenomenon with respectively 42.17 percent and 20.74 percent for F1 and F2 axis. This figure should be read as a function of the distance between the points. The smaller the distance, the more typical the variables are for the studied SPC. In our case, civil servants are characterized by high purchase frequency "Frq-Several times/month" and are much more interested in furniture rather than "Hi-Tech" products. As far as students are concerned, their purchasing frequency is rare and is characterized by an increased interest in Hi-Tech products, especially for the male gender. The female gender is more interested in clothing and footwear, and cosmetics. It is important to note that students, who purchase on a need basis, are less interested in furniture than civil servants and salaried employees.

4.6. ONLINE PURCHASING

The evolution of technology continues to have an enormous impact in the world of commerce. Customers now have the ability to shop online. It is therefore important for us to clarify the motives that drive customers to opt for this purchasing method. Online shopping emerged as a result of technological breakthrough. Consumers see in this phenomenon a mean to satisfy their needs. Figure 5 shows the main reasons why consumers opt for online purchasing.

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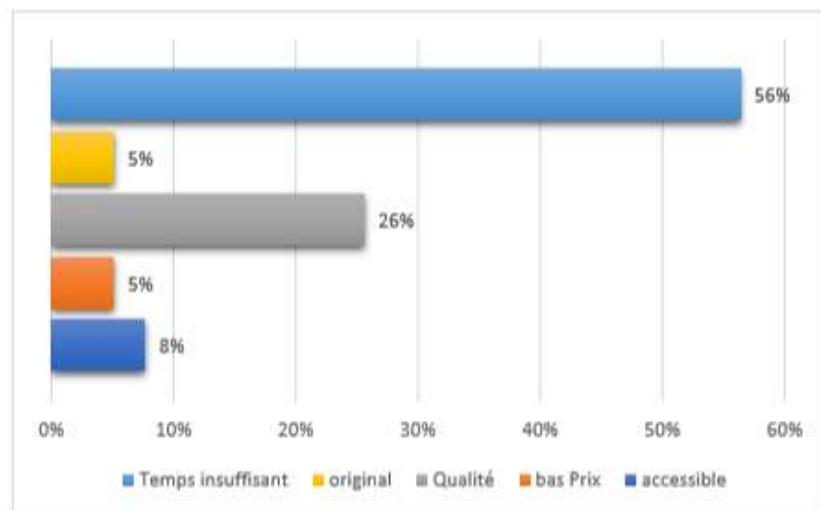
Figure 5: Primary reasons for online purchasing

The above figure shows that more than half of people who buy online (56 percent) indicated lack of time as the main reason to opt for this purchasing method. Product quality is in second place (26 percent). Originality, accessibility and low price matter little in choosing online commerce (5 percent, 8 percent and 5 percent, respectively).

4.7. PREFERENCES FOR ONLINE PURCHASING BY SPC

Online purchasing is more advantageous in terms of travel and time spent by consumers searching for the items they need. However, it requires the availability of suitable technological means that could make the difference in the preferences of each SPC.
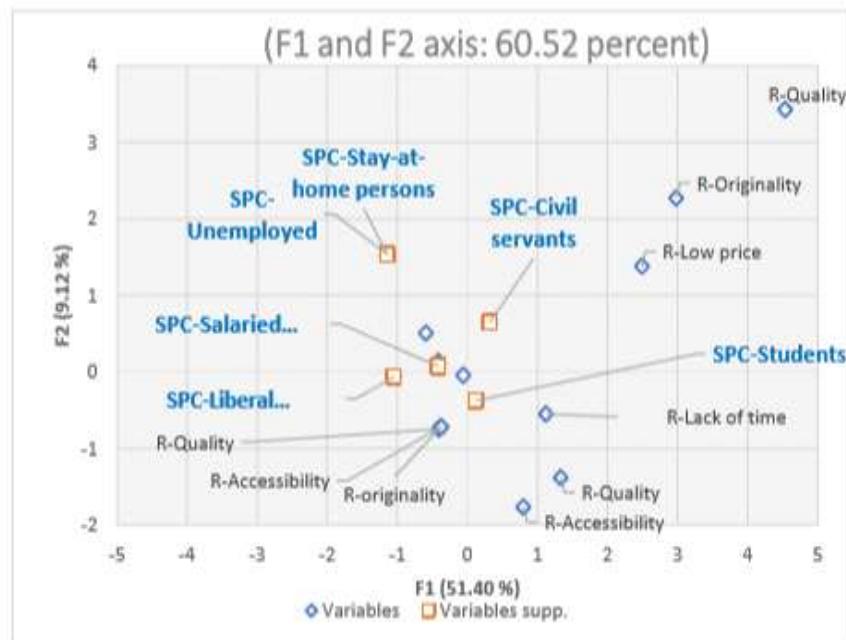
Figure 6: Reasons for choosing online purchasing, by SCP

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The MCA two-dimensional graphic representation shows 60 percent of the studied phenomenon, of which 51 percent are found on F1 factoral axis only. Figure 6 shows similarities in the purchasing behaviors of students, salaried employees, civil servants and liberal professionals SPCs.

4.8. TYPE OF GOODS FOR ONLINE PURCHASING

The specificity of online purchasing emphasizes that appropriation of new technologies is essential. Clothing/footwear, furniture, cosmetics and Hi-Tech products are the categories of goods frequently purchased online. Like direct purchasing, online purchasing can be made on a need basis, but rarely spontaneously. It can take place several times a month. Only data for students and civil servants SPCs were fully available in the database. As such, Figure 6 allows to identify of the categories of goods purchased online for these two SPCs only.
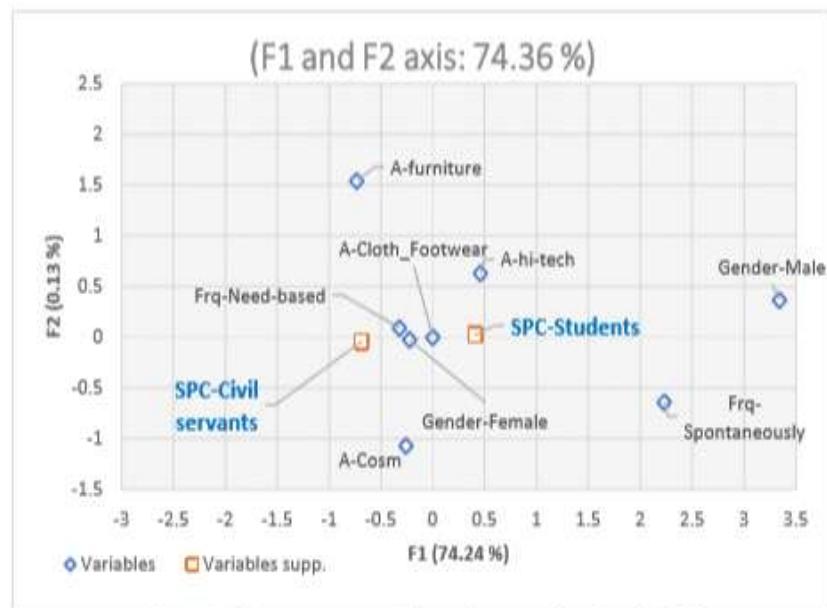
Figure 7: Reasons to opt for online purchasing, by SPC

Figure 7 shows 74 percent of the variability of the studied phenomenon, almost all of it being observed on the F1 factoral axis. This figure can also be read as a function of the distance between the variables. According to the figure above, civil servants opt for online purchasing on a need basis, as do students. Students are much more interested in clothing and footwear as well as Hi-Tech products compared to civil servants. The latter are more interested in cosmetics and furniture.

4.9. ROLE OF PRODUCT QUALITY IN THE CHOICE OF THE PURCHASING METHOD

Theoretically, quality is inseparable from needs satisfaction, which can be very different from one consumer to another. In other words, satisfaction cannot be achieved without a quality product and the concept of quality is inseparable from the qualities of the product (Giordano, 2006). This statement is confirmed in Figure 1, which shows that respondents' choice is based on the quality of the product (47 percent of respondents, including students and civil servants). The ability to verify whether the product really meets expectations at the time of purchase is one of the key strengths of traditional commerce, and is reflected in the transparency of the offer, which accounts for 26 percent of respondents.

The main block to online purchasing is trust. Indeed, when purchasing a product and/or a service online, customers face the constraint of the physical absence of a real interlocutor or representative. Moreover, the degree of certainty is limited. Product quality comes second only for 26 percent of respondents. This is in line with the idea that the integrity of the e-seller is decisive in online commerce (Lee and Turban, 2001), much more so than the quality of the product or service itself. Figure 2 shows homogeneous behaviors of the different SPCs, except for SPC-

Salaried employees. Actually, physical observation represents the main advantage of direct commerce for all the SPCs. Nevertheless, private sector employees have much less time for online purchasing because of possible overtime work even on weekends, during which all the other SPCs are making direct purchases.

4.10. RELATIONSHIPS BETWEEN SPCS AND THE TYPES OF GOODS

This study focuses on consumer goods, and once again, a distinction is made between durable consumer goods such as cars, household equipment, telephones, etc. and non-durable consumer goods such as perfumes, cosmetics, food and fuel. The goods listed in our survey questionnaire are both durable and non-durable goods. These types of goods have been selected to point up the most consumed products for both channels, i.e. clothing and footwear, Hi-Tech products, cosmetics/beauty products, and furniture (Figure 4).

In the case of traditional trade, the crossing of "purchase frequency" and "types of goods" variables with the SPCs reveals, firstly, that students rarely make purchases and when they do, they mostly buy Hi-Tech products. Secondly, salaried employees who make spontaneous purchases most often buy cosmetic products. Finally, civil servants frequently buy furniture and make purchases several times a month (Figure 7). As regards electronic products, purchases are generally made on a need basis by both students and civil servants. The low purchasing frequency of this type of customers explains the high cost of acquiring new customers (Gupta and Lehmann, 2003) for salespeople.

It is noted that the choice of the type of good and the frequency of purchase depend largely on the means of each SPC. The purchase of clothing and footwear is a common act, as they represent basic goods; however, it is characterized by a frequency of purchase that is higher than the other goods. This high purchasing frequency is an opportunity for entrepreneurs as firms will be able to motivate consumers' participation in the creation of new products (Prahalad and Ramaswamy, 2004), which could lead to a better match between supply and demand for a given product.

Goods that are specific for each SPC include furniture and Hi-Tech products: students do not have a preference for this type of goods, unlike civil servants who demonstrate a surplus of confidence in the traditional sale of furniture.

4.11. COMBINATION OF TRADITIONAL AND E-COMMERCE

We can identify two advantages of traditional trade: the quality of the product and the quality of human contact. In our study, traditional trade is known for the quality of the products it offers, which remains the primary reason why customers opt for this type of commerce (Figure 2). Other factors to be taken into account include expertise, the embodiment of "values" and customer service. Customers need to become familiar with the product before they buy it. Therefore, they need to see, touch, smell, and even try the product. This ensures a greater transparency of the offer which helps consumer confidence (Beldad *et al.*, 2010).

The aim of a good product is not only to satisfy the customer, but to create a good image for the firm (stores). But direct traders can also use social media by adopting a multi-channel strategy (Hansotia and Rukstales, 2002; Rangaswamy and Van Bruggen, 2005). In this way, product quality will not be the only factor that matters in commercial operations as the trader will also seek to establish a strong and lasting relationship with the buyer.

The proximity between customers and traders is a key factor in traditional trade. Through this channel, customers go to specialized shops to buy products that require expertise, such as pharmaceutical products. Despite running small businesses, these small traders apply basic CRM principles without knowing it. Nevertheless, some traders do not apply the concept of social CRM yet and simply make direct trade, giving rise to opportunity costs. Managerial implications will be addressed to these types of traders, who must be convinced that the use of CRM technologies alone is not enough and that a multi-channel strategy must be adopted to achieve business success (Trainor *et al.*, 2014).

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4.12. STUDY LIMITATIONS

Facebook and Messenger are the most widespread social media platforms used in Madagascar. Although other social networks are used, the scope of the study was limited to these two platforms.

To get the opinions of customers, the study attempted to segment customers based on the most representative socio-professional categories (SPCs) among the study population. The determination of SPCs depends to a large extent on the experience of the researcher as well as the expertise of the interviewees during the preparatory phase. Therefore, other categories of customers may not be represented by the selected SPCs.

5. CONCLUSION

Customer motivations are different for these two purchasing methods. In the case of traditional trade, they include – by order of preference – product quality, offer transparency and customer/seller interaction. Customers evaluate product quality primarily through the transparency of the offer and the interaction that exists between the seller and the customer, which are the drivers of satisfaction with product quality. These three factors represent the strengths of traditional trade. In the case of online commerce, the study found out that lack of time is the first motivation for online purchases, followed by product quality and accessibility. Customers' lack of time is the primary reason for online purchases, the quality factor comes second and is perceived only upon delivery. It is a delicate and sometimes disappointing moment when the product does not meet the quality expectations. These results confirm our initial hypothesis. However, some other considerations come to mind, including product availability and proximity for online vs. traditional trade.

SOURCES OF FUNDING

CONFLICT OF INTEREST

The author have declared that no competing interests exist.

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ARTICLE SCIENTIFIQUE N°15

DOES THE PURCHASE METHOD INFLUENCE CUSTOMER SATISFACTION? A CASE STUDY OF ONLINE AND DIRECT SALES IN MADAGASCAR

Résumé l'article n°15 :

LA METHODE D'ACHAT INFLUENCE-T-ELLE LA SATISFACTION DU CLIENT?
UNE ETUDE DE CAS DE LA VENTE EN LIGNE ET DIRECTE A MADAGASCAR

Depuis 2010, l'Internet a bouleversé le commerce dans les pays en développement comme Madagascar. Cela a pour conséquence directe l'émergence et la diffusion rapide des transactions en ligne. Etant donné que les clients ont des besoins complexes et des attentes élevées, plusieurs facteurs doivent être pris en compte pour atteindre la satisfaction du client. La qualité des produits a toujours été un facteur clé de satisfaction et de fidélisation des clients dans le commerce traditionnel. Cependant, cela pourrait ne plus être le cas avec l'avènement du commerce en ligne. Cet article met en évidence les éléments susceptibles de conduire à la satisfaction client, avec un focus sur les modes d'achat. L'enquête a été menée auprès d'un échantillon de 85 personnes de différentes catégories socioprofessionnelles, dont des étudiants, des salariés du secteur privé, des fonctionnaires, des chômeurs, des professionnels libéraux et des personnes au foyer. Les résultats d'une analyse à facteurs de correspondance multiple montrent les relations entre les niveaux de satisfaction, les méthodes d'achat et les produits. Le prix reste le principal facteur décisif dans le commerce traditionnel alors qu'une combinaison produit / service est plus répandue dans le commerce en ligne.

Mots clés : Rétention, confiance, marketing, commerce électronique, client

Certificat de publication de l'article n°15:

Does the Purchase Method Influence Customer Satisfaction? A Case Study of Online and Direct Sales in Madagascar

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Abstract: *Since 2010, the Internet has revolutionized commerce in developing countries, including Madagascar. This has as a direct consequence the emergence and rapid spread of online transactions. Because customers have complex needs and high expectations, several factors need to be considered to achieve customer satisfaction. Product quality has always been a key factor of customer satisfaction and retention in traditional trade. However, this may no longer be the case with the advent of online commerce. This article highlights the elements likely to lead to customer satisfaction, with a focus on purchasing methods. The survey was conducted among a sample of 85 people from different socio-professional categories (SPCs), including students, private sector employees, civil servants, the unemployed, liberal professionals and stay-at-home persons. The results of a Multiple Correspondence Factor Analysis (MCA) show the relationships between satisfaction levels, purchasing methods and the products. Price remains the major decisive factor in traditional trade whereas a product/service combination is more prevalent in online trade.*

Keywords: Retention, trust, marketing, e-commerce, customer

1. Introduction

Over the last few years, e-commerce has become a part of everyday life for Malagasy people. While one in ten (10 percent) respondents stated they had already made at least one online purchase in November 2017, in 2018, this proportion rose to over one in three (35 percent). The Internet is significantly lowering the cost of information search for customers (Ratchford *et al.*, 2003) and gives rise to a new method of commercial activities that take place online. The evolution of online transactions has gone hand in hand with several changes in customers' needs, which imply changes in customers' level of satisfaction.

Customer satisfaction is important to the survival of a business, and is influenced by a number of factors, including product quality, price and service quality. In Madagascar, price is generally perceived as a decisive variable. In traditional trade, price remains the main driver of exchange, since bargaining is part of the habits of Malagasy customers and it is easier to bargain when the seller is in front of you.

In online trade, complete satisfaction does not exist. Customers can be satisfied or dissatisfied with their purchase without the seller getting a direct feedback from them; however, a satisfied customer will come back.

Customer loyalty is not just a matter of satisfaction. It can stem from product quality, service quality, customer experience, the business image, and, in our study, the purchasing method. Loyalty being a result of repeated satisfaction, the following question was raised: does customer satisfaction depend upon the purchasing method? Considering the multiple factors that contribute to customer satisfaction, the main objective of this study is to identify the relationship between customer satisfaction and the purchasing method.

The following assumption was put forward: customer satisfaction is more influenced by the quality of the product than the means of obtaining it, and among other things the purchasing method. Indeed, if the cost of acquiring an item is high enough, the customer might not be satisfied despite its quality. It is expected that the study will assess the importance of goods and services quality for customers for the two purchasing methods as a first step and, as a second step, it will determine factors of customer loyalty.

2. Theoretical and conceptual framework

2.1 Customer Relationship Management

Customers are a strategic asset for a business. Several studies show that customer orientation is a performance factor (Reiman, 2009). Customer Relationship Management (CRM) is an approach that enables to identify, attract and retain the best customers, thereby helping to generate more sales and more profits (Venturi and Lefebure, 2005). Based on this

definition, CRM involves three implicit dimensions: (i) a temporal dimension with the necessary establishment of a profitable long-term relationship; (ii) a relational dimension with the desire to be as close as possible to the customer, whatever the contact point and the time chosen by the latter; and (iii) an operational dimension with the need to manage the complexity of the customer/supply/channel combination with dedicated tools.

Taking into account these three dimensions, CRM translates into the ability to build a profitable long-term relationship with the best customers by capitalizing on every contact point through an optimal allocation of resources. Customer loyalty must be viewed as a strategic objective, and definitely not as an ordinary, one-off promotional activity. Customer loyalty is a hallmark of a marketing strategy; it must also allow the best control of the business' activity and lead to increased profitability in the long term (Lehu, 2003).

From a theoretical point of view, e-CRM is a subset of CRM. CRM is intrinsically multichannel, since it manages the customer regardless of how he/she interacts with the business, including through the Internet (Cinquin, 2002). e-CRM can be defined as a set of approaches, tools and processes that address the need to know customers, allow customer analysis and segmentation, and trigger automated actions and online customer support (Rosset, 2009). In Madagascar, the emergence of *mobile money*[1] systems currently offers customers the opportunity to pay for their purchases instantly.

2.2 Purchasing methods and customer motivations

Customer satisfaction comes into play in the choice of the purchasing method. In most cases, satisfaction is based on product quality, service quality, and price. However, the priority given to each factor varies depending on the purchasing method.

2.3 Trust in online transactions

An individual's tendency to trust others is usually the consequence of life experiences, personality type and culture (Fukuyama, 1995). In the world of e-commerce, building trust between sellers and buyers is of paramount importance. The factors that contribute to building trust in online transactions undoubtedly include integrity, ability, and benevolence (Lee and Turban, 2001). Indeed, for customers, trust in online transactions contributes to reduce their vulnerability, particularly with respect to security and privacy during the transactions (Beldad et al., 2010; Blut et al., 2015).

2.4 Satisfaction and trust

Kotler and Dubois (2009) define satisfaction as the positive or negative impression customers have after a purchase and/or consumption experience. It results from a comparison

[1] In collaboration with primary banks, mobile telephone operators in Madagascar have set up systems that enable to make online instant money transactions (money transfer and savings) between users.

between their expectations of the product and its perceived performance. Satisfaction results from the customers' contentment with the buying experience with the e-seller (Anderson and Srinivasan, 2003). In addition, trust is intrinsically linked with customers' satisfaction, especially in the case of online transactions. A series of positive encounters will demonstrate that a customer has reinforced his or her trust in the e-vendor and consequently was led to a satisfactory purchase experience (Chen and Chou, 2012). Therefore, trust in the choice of the purchasing method may depend on the perceived satisfaction with the first purchase.

2.5 Assessment of satisfaction

A product is assessed on the basis of a set of attributes. In order to determine how the customer's judgement on each of these attributes is made, it is necessary to analyze the three criteria of satisfaction which are: subjectivity, relativity and scalability.

Source: Ray Daniel, 2001
Figure 1: Perceived and expected quality by customers

Satisfaction is subjective: each customer perceives the product or service differently. Satisfaction depends only on the customer's own perception, not on objective reality. It is therefore highly likely that the perception of the product or service is far from reality.

Satisfaction is relative: it depends on the customer's perception. Satisfaction varies according to the levels of expectation. If you take two customers and ask them for their opinion about a given service, their answers may well be different simply because their initial expectations of that service are not the same. What counts is not to offer the best product or service, but to offer what best suits the customers' expectations.

Satisfaction is scalable: it is rare today that a customer remains satisfied with a service or product for a long time. Satisfaction evolves over time as expectations and market standards change. It also evolves during the use cycle of the product or the service.

Businesses no longer simply offer products to their customers, but a mix of products and services (Parasuraman, 1998). We therefore consider that customer satisfaction is based on an overall judgment of the experience with the vendor, i.e. of the product(s) as well as the services offered.

Accordingly, satisfaction is the result of a comparison between expectations and perceived performance.

2.6 Satisfaction and loyalty

In competitive markets, marketing investment priorities mainly focus on customer loyalty and retention because satisfied customers are not necessarily loyal. The definitions of the concept of customer loyalty vary widely. Marketing specialists have given several definitions to this term. Baynast et al. (2017) define customer loyalty as a set of actions related to the product, the price, to communication or promotional activities, intended to strengthen customers' loyalty to a specific brand. It is a mistake to consider satisfaction as the only reason for customer loyalty. Other factors influencing loyalty include the product's perceived quality, its relative price, the nature of the associated services, product and brand reputation, the image of the sector, the specific image of the product and the brand, knowledge and experience, mentions, specifications and other endorsements of the product, the relevance of the purchase and the perceived risk, the quality of the point of sale, the time of need and the time spent on the purchase.

In online transactions, the loyalty of the costumer depends on his or her past experience. Indeed, the voluntary commitment of a buyer to a specific vendor is the result of cumulative online experiences that have created and developed trust between the two parties, and this encourages the buyer to renew the purchase experience with the same source (Chiu et al., 2012). Loyalty cannot be established without trust.

3. Methodology

3.1 Structured interview

This type of interview is very similar to the questionnaire-based survey, with the difference that the information is collected orally rather than through the completion of a paper. During the interview, the interviewer asked questions according to a strict predefined protocol (the objective was to avoid that the respondent goes beyond the questions asked and the scope defined). Interviews were conducted in several highly populated locations in the city of Antananarivo, including Antanimena, Ampefiloha, 67ha, Alarobia, Ankazomanga, and Ankatso to achieve significant diversification of the responses. Structured interviews present the advantage of minimizing misunderstanding by the respondent.

3.2 Sampling and data collection

Once the characteristics of individuals have been determined based on the interviews, the next step is to determine the sample size. The basic sample size calculated using sampling formula[2] is 385 people. However, given the homogeneity of some groups, the number was adjusted downwards. The purposive sampling method was used to select the

respondents. Consequently, the number of respondents, taking into account the recommendations from the interviews, was 85 people.

3.3 Data processing

Following a literary review of the subject matter, a more pragmatic approach using sampling techniques was adopted. The results are summarized below. However, we consider it appropriate to provide following clarifications:

3.4 On the assessment of the importance of the quality of goods and services for customers

In traditional trade, customers' expectations of a product have been grouped into five categories: product quality, customer/vendor interaction, transparency of the offer, price, and lack of access to the Internet. In online trade, expectations have also been grouped into five categories: quality, accessibility, price, lack of time and originality. The importance of satisfaction is measured using Likert scale questions with four levels to avoid neutral answers. The levels of satisfaction are as follows: strongly disagree, disagree, agree, strongly agree. This exercise is of interest because it reveals the main motives that characterize each purchasing method, based on the level of acceptance by the customer of the assertions in the questionnaire.

The variables used are: satisfaction levels, priorities of the goods purchased, and motives of purchase. As these variables are not quantifiable, the appropriate analysis tools will be qualitative methods. Since the objective is to find out the relationship between these qualitative variables containing several modalities, the appropriate analysis tool is a multivariate analysis. The Multiple Correspondence Factor Analysis (MCA) was therefore applied. The results are illustrated in the form of a two-dimensional symmetrical graph displaying the two factorial axes which are most important for the studied phenomenon.

3.5 On the determination of the factors of customer loyalty

The reasoning remains focused on the characteristics of the respective satisfaction levels. The subscription to a particular vendor is a sign of loyalty for the customer; it is therefore necessary to determine the factors that make customers loyal. For each purchasing method, these factors of loyalty will be linked to the level of customer satisfaction.

The variables used are the existence of a particular vendor, the factors of loyalty and the levels of satisfaction. The variables of the study are qualitative in nature as it is impossible to assign them a numerical value. Logically with the existence of these three qualitative variables, the appropriate analysis tool is also the Multiple Correspondence Factor Analysis (MFA) to show the links between the variables. The results are presented in a two-dimensional symmetrical graph representing these different variables. The choice of the two factorial axes will depend on their importance.

[2] The theoretical sampling formula is $n = [z^2 p (1-p)] / [e^2]$

4. Results

4.1 Importance of the quality of goods and services

Customer satisfaction with a product may vary depending on the purchasing method. Since their degree of importance is assumed to be different, measurement scales are the main tools in determining customer motivations. The level of customer satisfaction could be related to the items purchased. There are four levels of satisfaction, ranging from unsatisfied to very satisfy. In addition, some items may be more suitable for online sales and others to direct sales.

4.2 Direct sales

In the case of direct sales, customer satisfaction comes not only from product quality, but also from service quality. Figure 1 below shows the level of customer satisfaction according to their respective priorities and motives.

LEGEND:
Satis-S: Satisfied
Satis-VS: Very satisfied
Satis-MS: Moderately satisfied
Satis-NS: Not satisfied
Prio-Q_Sce: Priority service quality
Prio-Q_Prod: Priority product quality
Motive-trans: Transparence of goods
Motive-Price: Price
Motive-inter: Interaction between customer/vendor
Motive-Lack: Lack of access to the Internet
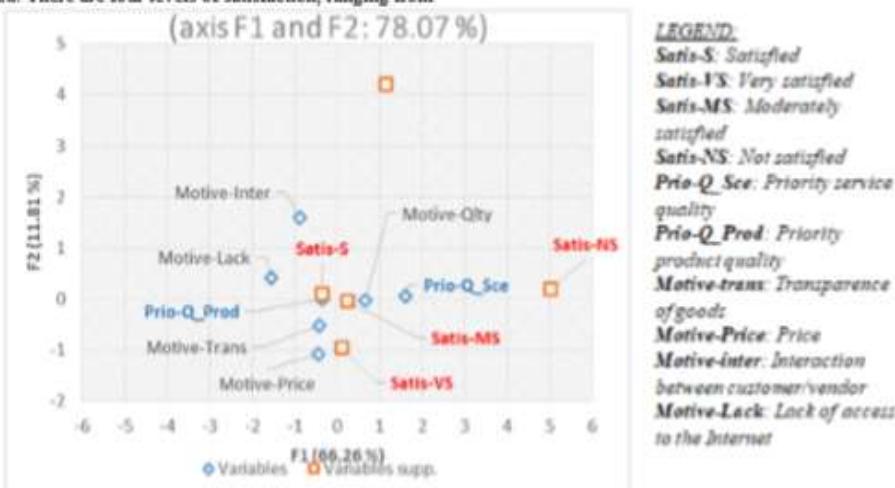
Figure 2: Levels of satisfaction for direct sales according to customers' motives

The MCA two-dimensional graphic representation shows 78 percent of the phenomenon studied with a concentration of information on the F1 factorial axis (66 percent). According to this figure, positive satisfaction levels (moderately satisfied, satisfied, very satisfied) are fairly homogeneous. In other words, product quality makes customers more satisfied than service quality. Moreover, price remains the main reason that makes a customer "very satisfied" in the direct sales.

4.3 Online sales

It is also important for us to measure customer satisfaction levels. The consequences of technological advances are more important in the results. The following figure summarizes the levels of customer satisfaction with online sales according to their priorities and motives.


LEGEND
Satis-S: Satisfied
Satis-VS: Very satisfied
Satis-MS: Moderately satisfied
Satis-NS: Not satisfied
Prio-Q_Sce: Priority service quality
Prio-Q_Prod : Priority product quality
Motive-Qlty: Quality
Motive-Price: Affordable price
Motive-Original: Originality
Motive-Time: Lack of time
Motive-Access: Vendor accessibility
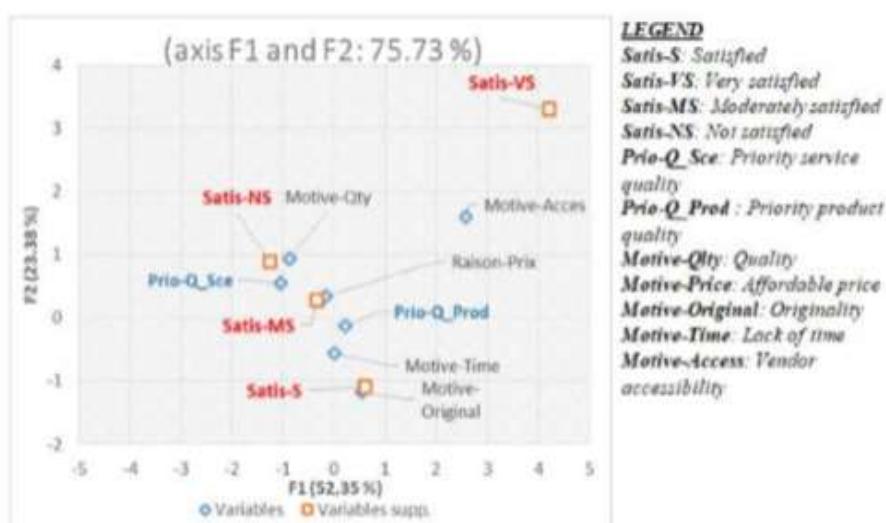
**Figure 3:** Levels of satisfaction for direct sales according to customers' priorities and motives

The MCA two-dimensional graphic representation shows 75 percent of the information on the phenomenon studied, 52 percent of which is concentrated on the F1 factorial axis. Figure 3 shows the heterogeneity of the different levels of satisfaction. Customers are not satisfied with the quality of service and the quality of the item itself, but they are moderately satisfied with the price. Customer satisfaction with online sales depends mainly on the originality of the product and the time it takes to make the purchase. In addition, accessibility, which is closely related to the time spent, makes them very satisfied with the online purchasing method.

4.4 Loyalty factors

Marketing is not only about finding customers, but also about how to keep them coming back. Loyalty is the logical outcome of customer satisfaction. We will look at the criteria that make customers loyal to a specific business for both direct and online sales.

4.5 Loyalty in direct sales

Loyalty criteria are centered around product quality, service quality, and price. The following figure highlights the relationships between these criteria and customer satisfaction levels as well as the type of product purchased by customers.
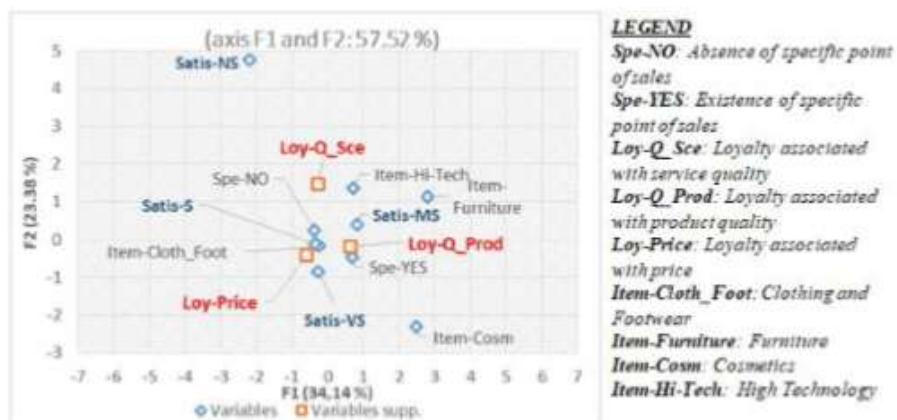
Figure 4: Loyalty and levels of satisfaction for direct sales

The MCA two-dimensional graphic representation shows 57 percent of the information on the phenomenon studied, of which 34 percent is concentrated on the factorial axis F1. According to this figure, customers are satisfied or even very satisfied with the purchase of clothing and footwear items, with price as the criterion of customer loyalty. It should also be noted that product quality is one of the criteria for customer loyalty to a specific store. By contrast, in the case of Hi-Tech items, service quality makes customers loyal although they are moderately satisfied with the purchase.

4.6 Loyalty in online sales

As with direct or traditional sales, loyalty criteria in online sales are centered around service quality, product quality or price. The following figure provides an overview of the criteria that influence loyalty.
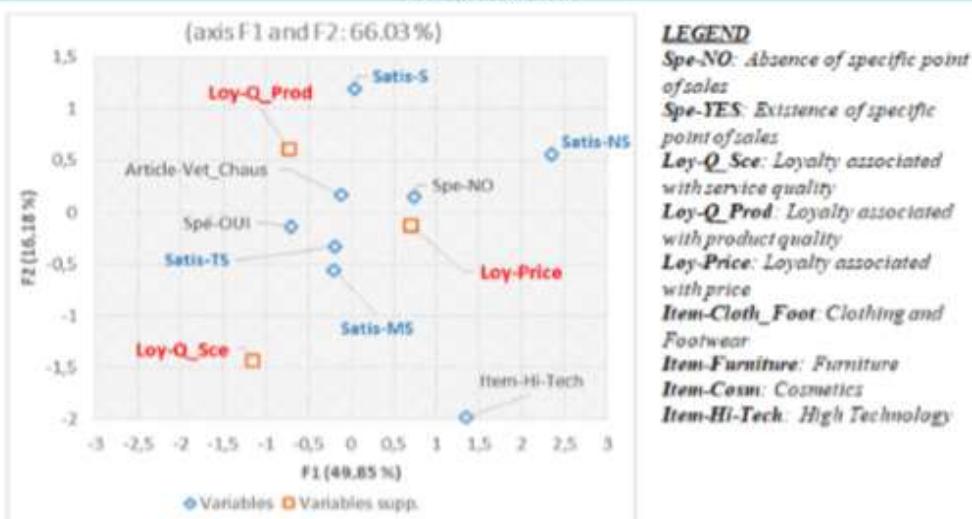
Figure 5: Loyalty and levels of satisfaction for online sales

The MCA two-dimensional graphic representation shows 66 percent of the information on the phenomenon studied, of which about 50 percent is concentrated on the factorial axis F1. According to this figure, price is not necessarily a criterion to retain a customer or to renew the act of purchase. For clothing and footwear items, customer loyalty depends on both product and service quality. However, price remains an indicator of high customer satisfaction.

5. Discussion and Recommendations

5.1 Case of direct sales

The study identified three major loyalty factors, namely loyalty based on price, product quality and service quality. It was found from the results that the price factor remains the greatest asset of traditional trade because customers are very satisfied with their purchase if they get a good price. Furthermore, customers are moderately satisfied with product and service quality, thus product based loyalty comes second and service quality comes last (Figure 2). Parasuraman's (1998) assertion that businesses no longer simply offer products to their customers but a mix of services and products seems to have no significant impact on customer satisfaction, where price remains the main source of satisfaction. According to Figure 2, the transparency of goods contributes to customer satisfaction. Indeed, customers are not disappointed with the items they have purchased. Therefore, it can be said that customers' perceptions match with their expectations.

In order to build customer loyalty during direct purchases, price is the most decisive factor, especially when the seller does not specialize in a given product (Figure 4). Items of intermediate consumption in the clothing and accessories sector are the most demanded in this purchasing method. Nevertheless, hi-tech items require more interaction between the seller and the buyer. This could include point-of-sale advertising, technical support from salespeople, and after-sales services. Mastering CRM would be an asset in building customer loyalty in the case of tech and high-tech as well as clothing and accessories items.

5.2 Case of online sales

The accessibility of the seller and the originality of the product are the main sources of satisfaction for the buyer in online sales (Figure 3). Therefore, social networks are an effective means to showcase the creativity of sellers by focusing on product originality and reputation. In addition, dissatisfied customers are sensitive to the quality of goods and services. Products published online may not completely meet the customer's expectations without a visual inspection, which is a source of dissatisfaction. E-merchandising thus proves to be very effective for online sales at the expense of the customer's perception of the actual features of the product. The seller's sincerity is vital in online sales to win the trust of customers. It should be noted that integrity is one of the factors that contribute to building trust in online transactions (Lee and Turban, 2001).

Furthermore, e-sellers need to enhance their servuction capacity in order to build a solid relationship with buyers. This is why e-CRM exists. Unlike with direct sales, price is no longer the determining factor in customer satisfaction. Product quality is more important because the customer cannot rely on the quality of a product that is very well presented on social networks. The positive buying experience is at the heart of satisfaction (Anderson and Srinivasan, 2003). Maintaining the positive image of the e-seller by being accessible and offering original products is the key to building consumer loyalty.

In traditional trade, customers are very satisfied with the price, whereas in online trade, mistrust towards purchases is well-founded since buyers are not entirely satisfied: they are either moderately satisfied or not at all satisfied. Therefore, the hypothesis is partially confirmed due to varying degrees of satisfaction.

5.3 Study limitations

This study focused only on the diversity of results according to each category of buyers. Preliminary interviews were used to determine the proportions of each category in order to refine the sampling design. This study is therefore highly dependent on respondents, both in the choice of customer categories and their respective proportions. The dominant variables are qualitative in nature and do not account for quantitative variables.

Likert scales were used to estimate customers' satisfaction levels. The latter were linked with customers' motives, the categories of items purchased, and loyalty factors. Nevertheless, the modalities of the qualitative variables used (motives, categories of items, loyalty factors) were chosen solely on the basis of their occurrence. Other response modalities that may be useful to the study were not considered.

6. Conclusion

In light of the discussions above, businesses need to get continuously closer to customers while building relationships to strengthen the existing bond and build customer loyalty. To this end, businesses use a variety means, among which new information and communication technologies are increasingly becoming popular, particularly the Internet. Every day, new technological advances further enhance the power, the reliability and the user-friendliness of the Internet. This is a fundamental consideration, because business-customer relationship is no longer quite the same on the Internet. There is no longer a physical contact with the customer; however due to its permanent availability, the Internet is a growth vector for customer loyalty.

Commerce has evolved rapidly with the advancement of technology. Direct sales are no longer the only way of shopping as customers can also buy online. In Madagascar, online sales are synonymous with sales on social networks, particularly via Facebook. Traditional commerce is competing with the latter. However, the establishment of e-commerce faces challenges in Madagascar, where Internet penetration rate is far too low at 5.4 percent, according to a study published in 2015 by ARTEC (*authority of regulation of communication technologies*). This low penetration rate can be easily explained by the prohibitive prices charged by Malagasy Internet service providers, which continue to increase every year. This situation leads to the obvious question, "What is the future of e-commerce in Madagascar?"

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