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Table of Contents

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The *International Journal of Business & Applied Sciences* (*IJBAS*) is a double-blind peer reviewed journal of Business and Applied Sciences Academy of North America (BAASANA) that provides guidance for those involved at all levels of business and applied sciences. The journal publishes research papers, the results and analysis of which will have implications or relevance to policy makers and practitioners in relevant fields. IJBAS gives priority to empirical/analytical research papers. The field of business and applied sciences is a complex one. It is influenced by the many social, technological and economic changes evident in the world today.

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Editorial

The papers presented in this issue of the *International Journal of Business & Applied Sciences (IJBAS)* cover such topics as factors affecting student satisfaction and profitability of a commercial bank, role of micro-financing coupled with educational and social programs in women empowerment, and impact of the economies of Portugal, Italy, Ireland, Greece and Spain (PIIGS) on German's export juggernaut.

The first paper entitled "Student Satisfaction and Its Antecedents: How Does Student Satisfaction Index Model Matter in the Context of Joint Master's Degree Programs in Vietnam" by Pi-Yun Chen, Long Pham, Brad Cousins, and Cuong Bui proposes an integrated model to assess the factors affecting student satisfaction with joint master's degree programs in Vietnam. In line with Student Satisfaction Index model (Temizer and Turkyilmaz, 2012), the results show significant positive relationships between image, student expectation, perceived quality, perceived value, and student satisfaction. The second article by Ganesan Palanisamy, Anita S. Mane, Shaik Nagoor Meera, and Madduluri Sarveswara Rao entitled "Determinants of Profit and Profitability of Rwanda Commercial Banks: A Profit Function Approach" employs the profit function approach by disaggregating the factors into input, output, risk, macroeconomic factors and social factors and examines these factors' effect on profit and profitability of a commercial bank in Rwanda. The results show that the employee cost is most significant factor affecting the profit as well as profitability of the selected commercial. Interest and non-interest income also contribute to the profit and profitability along with deposit per branch and risk factor.

The third article by Marilu Marcillo entitled "Micro-Finance and Entrepreneurship in Developing Countries" discusses Ciudad Mujer (CM) from El Salvador and Farmers of the Future (FOF) from Niger Africa to show how micro-financing, coupled with educational/training programs and social programs can help women entrepreneurs thrive in developing economies to overcome the unique challenges that they face. The fourth article by Ian Wise, Donald Crooks, Edward Strafaci and Cathyann Tully entitled "The Steroid of Forex Leverage---How the PIIGS Propel the German Export Juggernaut" focuses on the impact that Portugal, Italy, Ireland, Greece and Spain (PIIGS) had on the export strength of the German economy. The authors investigate how the Swiss Franc reacted once the Swiss government elected to break its linkage to the Euro. The paper concludes that the economies of the PIIGS had played a major role in the devaluation of the Euro enabling the German export juggernaut to continue, enhanced by the favorable Euro foreign exchange rates.

In conclusion, I hope you will find these articles and book review presented in this issue interesting and worthwhile. *I would like to take this opportunity to thank* all those who submitted manuscripts for this issue. I also thank all the reviewers for providing insightful and constructive feedback to authors.

The *IJBAS* continues to attract high quality scholarly works that are not only cross-disciplinary and offer important practical and theoretical implications, but add significant dimensions of international perspectives. I hope you will consider submitting your research works to *IJBAS* in the future.

Sincerely,

Dr. Yam B. Limbu,
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Student Satisfaction and Its Antecedents: How Does Student Satisfaction Index Model Matter in the Context of Joint Master's Degree Programs in Vietnam

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Abstract

Vietnam is increasingly integrated into the world economy, and in the process, reaping impressive economic results. As a result of the rapid integration, the education sector has enjoyed significant growth, especially in the number of joint master's degree programs offered by foreign universities in Vietnam. Despite this rapid integration and increase in joint degree programs, to date, very little research has been conducted to assess Vietnamese student satisfaction with joint master's degree programs. To bridge this research gap, the aim of this study is to develop an integrated model to assess the factors affecting student satisfaction with joint master's degree programs in Vietnam. Based on regression analyses, the results indicate six positive relationships: image and student satisfaction; image and student expectation; student expectation and perceived quality; perceived quality and perceived value; perceived value and student satisfaction. The results also indicate that perceived quality has the most important impact on perceived value; and perceived value has the most important impact on student satisfaction. The results of this study are consistent with that of Temizer and Turkyilmaz (2012), meaning that the SSI (student satisfaction index) model is reliable and valid under cross-cultural circumstances.

Keywords: Student satisfaction, student expectation, perceived quality, perceived value, image, Vietnam.

1. Introduction

Today, with rapidly growing globalization, international education in Vietnam is experiencing significant growth. According to Ngoc (2013), International education can be understood in two primary ways. The first understanding focuses on the results of the program, meaning, the joint training program allows students to receive international degrees upon their graduation from Vietnamese universities. The second understanding emphasizes content and process of implementation, holistically considering the results students have received and absorbed during the joint training programs. International education in Vietnam is increasingly common and widely deployed (212 programs) with different joint training forms (bachelor’s and master’s degrees), in partnership with many reputable global universities and educational institutions (Hoang, 2013). Universities around the world have launched a variety of masters programs in Vietnam with a diverse selection of majors such as agriculture, economics, business, information technology, and law, to name a few.

Masters training programs are bringing a couple of key benefits for Vietnamese students. First, master training builds on knowledge acquired in bachelor’s degree programs by providing students a deeper understanding of the subject material from an international education perspective. Employers recognize, and studies show, professionals with a master degree on average perform better at work than their counterparts without a master degree. As such, master’s degree graduates either commence employment at a higher level than they would have, or are soon promoted. Secondly, advanced learning is widely considered as a strategy to counter uncertainty; this is evidenced by the increase in the number of master programs for the last 5 years despite the worldwide economic recession. Scarcity of jobs due to economic recession has indirectly been a factor in the increased demand for post graduate education in Vietnam. As this research demonstrates, advanced education provides students additional job opportunities placing applicants in a much more competitive position than peers without an advanced degree and provides a larger, more internationally diverse, base of knowledge beyond the bachelor’s degree.

Obviously, the benefits of a bachelor’s program are undeniable; however, as living quality continues to rise in Vietnam, the job market has become more competitive requiring advanced degrees to compete. With the knowledge and degree from master courses, graduates have enjoyed increased access the job opportunities. Many jobs now demand applicants to demonstrate their achievements at the postgraduate level, either as a requirement for starting a career or as a necessity to secure promotion to more senior levels. Having a master degree is an edge in a competitive job market and most graduates with a master’s degree secure a job within three months of graduation. In spite of the substantial financial costs, the advantages of job placement for students with a master’s degree outweigh other considerations (Hoang, 2013).

Joint master’s program is a model of education to create opportunities for social learning. In fact, joint master’s program is a trend not only popular in Vietnam but also in many countries around the world. Most activities of joint master’s program are carried out between universities from developed nations (based on English speaking programs) such as the UK, the US, Canada, Australia, and New Zealand, with educational institutions in developing countries such as Vietnam (Ha, 2013). These programs bring several mutual benefits to the training parties and participants. If joint master programs are executed well, it will help educational organizations enhance their prestige, attract more students and international lecturers to participate in the program, and in turn help institutions of higher education access to education development funds and promote cooperation in scientific research. Additionally, joint master programs aide in rapid expansion of training networks and increase international attributes for training activities of the related parties providing additional revenue for the educational institutions. Finally, as joint master programs increase, so do the opportunities for local teaching staff to improve language skills due to foreign institutions requiring classes be taught in English or the language of the country that issues the degree (Hoang, 2013).

Vietnam has increasingly integrated into the world economy and as such, the country has reaped many impressive economic and education results. There continues to be an increasing number of joint master’s degree programs offered by foreign universities in Vietnam, however, almost no research has been conducted in Vietnam to assess students' satisfaction with these joint master’s degree programs. To bridge this gap, the aim of this study was to develop an integrated model to assess the factors that affect student satisfaction with joint master's degree programs in Vietnam, and to provide recommendations for solutions for universities in Vietnam which are implementing these joint master's degree programs.

2. Literature Review

Student Satisfaction

According to Oxford Dictionary, satisfaction is defined as a fulfilment of one's wishes, expectations, or needs or the pleasure derived from this. According to Feclikova (2004), satisfaction is interpreted as a feeling which results from a process of evaluating what was received against that expected, the purchase decision itself and/or the fulfilment of needs/want. Thus, satisfaction refers to achieving the things people want. There are many kind of satisfaction like customer satisfaction, job satisfaction, employee satisfaction, and life satisfaction. In this study, researcher focuses on student satisfaction.

Businesses need to understand that to what extent their customers would be satisfied. Customer satisfaction is the degree to which a customer perceives that an individual, firm or organization has effectively provided a product or service that meets the customer's needs in the context in which the customer is aware of and/or using the product or service; satisfaction is not inherent in the individual or the product but is a socially constructed response to the relationship between a customer, the product and the product provider /maker (Reed et. al., 1997).

Zhang et al. (2008) suggested that evaluation of customer satisfaction often through Swedish model (SCSI), American model (ACSI) and Europe model (ECSI). ACSI embeds customer satisfaction within a series of cause-and-effect relationships. In the model, indices for the drivers of customer satisfaction are on the left side (customer expectations, perceived quality, and perceived value), customer satisfaction is in the center, and the outcomes of customer satisfaction are on the right side (customer complaints and customer loyalty, including customer retention and price tolerance). Customer expectations serve as a measure of the customer's anticipation of the quality of a company's products or services. Expectations represent both prior consumption experience, which includes some non-experiential information like advertising and word-of-mouth, and a forecast of the company's ability to deliver quality in the future. Perceived quality is a measure of the customer's evaluation via recent consumption experience of the quality of a company's products or services. Quality is measured in terms of both customization, which is the degree to which a product or service meets the customer's individual needs, and reliability, which is the frequency with which things go wrong with the product or service. Perceived value is a measure of quality relative to price paid. Although price (value for money) is often very important to the customer's first purchase, it usually has a somewhat smaller impact on satisfaction for repeat purchases. Customer complaints are measured as a percentage of respondents who indicate they have complained to a company directly about a product or service within a specified time frame. Satisfaction has a negative relationship with customer complaints, as the more satisfied the customers, the less likely they are to complain. Customer loyalty is a combination of the customer's professed likelihood to repurchase from the same supplier in the future, and the likelihood to purchase a company's products or services at various price points (price tolerance).

ECSI is a model for CSI measurement, based on the model of Sweden and the U.S. This model consists of nine latent variables, each of which includes a number of expressions (European Report, 2005). Image variable is expected to influence perceived value, satisfaction and customer loyalty. Perceived quality was divided into separate variables: a product quality (hardware quality) describes performance of the product/service attributes, a service quality (human ware quality). According to European Report (2005), ECSI has been modelled in a way that is similar to ACSI.

The student is a special customer in a special service environment. The student is part of the product development (Jurkowitsch et al., 2006). Student satisfaction is one kind of customer satisfaction just because education currently is known as a special type of services. Mansor et al. (2012) stated that it is a challenge for universities to understand their students' needs and to transform these needs into services that will satisfy the students. Furthermore, student's overall satisfaction with educational experiences is viewed as a key component in maintaining a long-term competitive advantage for an institution of higher education. Mansor et al. (2012) adapted the Hierarchical Service Quality Model (HSQM) proposed by Brady and Cronin (2001) as a comprehensive multilevel construct that consists of three primary elements such as interaction quality, physical environment quality, and outcome quality to study student satisfaction. Mansor et al. (2012) identified the positive relationships between student satisfaction and interaction quality, physical environment quality, and outcome quality.

Grace et al. (2012) examined the CEQ dimensions including good teaching, clear goal setting, appropriate workload, appropriate assessment, and generic skills development to study student satisfaction. Their results indicated that good teaching and clear goal setting have a direct influence on student satisfaction, whereas appropriate assessment and appropriate workload do not have a direct effect on student satisfaction. Hanaysha et al. (2011) found a significant relationship between the five dimensions of service quality (tangibility, reliability, responsiveness, assurance, and empathy, or SERVQUAL) and student satisfaction. Considering a student as a citizen (not a customer), Zneldin et al. (2012) integrated technical-functional quality and Servqual into a framework of five quality dimensions (5Qs). 5Qs contain quality of the object, quality of the process, quality of the infrastructure, quality of the interaction and communication, and quality of the atmosphere that all have impacts on student satisfaction.

Temizer and Turkyilmaz (2012) impressed with a student as a customer. They have developed and tested a student satisfaction index model (SSI) for institutions of higher education. The results showed that aspects such as the image of the university, expectations, perceived quality, and perceived value have impacts on student satisfaction.

University Image

According to Hsieh et al. (2004), a successful brand image enables consumers to identify the needs that the brand satisfies and to differentiate the brand from its competitors, and consequently increase the likelihood that consumers will purchase the brand. A company (or its product/services) which constantly holds a favorable image by the public would definitely gain a better position in the market, sustainable competitive advantage, and increase market share or performance (Park et. al., 1986).

Kotler (2001) defined image as the set of beliefs, ideas, and impression that a person holds regarding an object. Keller (1993) considered brand image as a set of perceptions about a brand as reflected by brand associations in consumer's memory. A similar definition to Keller's was proposed by Aaker (1991), whereby brand image is referred to as a set of associations, usually organized in some meaningful way. Bruinsma (2004) defined brand image as a cluster of attributes and associations that consumers connect to the brand name.

Some research studies differentiated corporate image from brand image. Kandampully and Hu (2007) stated that corporate image consisted of two main components. The first is functional such as the tangible characteristics that can be measured and evaluated easily. The second is emotional such as feelings, attitudes and beliefs one has towards the organization. These emotional components are consequences from accumulative experiences the customer has with the passage of time with the organization. Corporate image is defined as the "overall impression" left in the customers' mind as a result of accumulative feelings, ideas, attitudes and experiences with the organization, stored in memory, transformed into a positive/negative meaning, retrieved to reconstruct image and recalled when the name of the organization is heard or brought to ones' mind (Hatch et al., 2003). Thus, corporate image is a result of communication process in which the organizations create and spread a specific message that constitutes their strategic intent; mission, vision, goals and identity that reflects their core values (Leuthesser and Kohli, 1997). This is consistent with Keller's (1993) worldwide vision of brand image that is corporate image could be considered as a type of brand image in which the brand name refers to the organization as a whole rather than to its sole products/services. All definitions of image mentioned above vary due to different theories used. However, these theories also showed that image can generate value (Roth, 1995). Image of university can be seen as an image of corporate.

Brand identity for a university refers to how the institution wants to be, and is perceived by prospective students, the existing students, alumni, legislators, and the public (Lawlor, 1998). To enlarge scope and reach the targeted students, many universities intentionally develop a unique image. Brand is also understood as a reputation, the principles, and goals the organization is aspiring for, and as what an individual may expect when using the services of the organization (MacMillan et. al., 2005). The student's perception of university reputation is very important to attract and retain students (Standifird, 2005).

Student Expectation

To some researchers (Anderson, 1973; Churchill and Surprenant, 1982; Oliver, 1977; Westbrook and Reilly, 1983), expectations are significant beliefs (before experience) about product global performance, formed by company suggestions or by product information. Swan and Martin (1981) indicated that expectations represent the anticipated satisfaction of product consumption. Olson and Dover (1976), Oliver and Linda (1981), Churchill and Surprenant (1982), Bearden and Teel (1983), and Westbrook and Reilly (1983) defined expectations as beliefs about attributes levels of a product that can be measured as individual beliefs or as those beliefs sum. McDougall and Levesque (2000) suggested four types of expectations that can be used by consumers in the process of satisfaction formation: ideal or wished-for level, expected or predicted level, minimum or lowest accepted level, and deserved or appropriate level. Parasuraman et al. (1991) suggested that expectations can be bounded by an adequate and desired level of expectations.

Perceived Quality

Hasan and Ilias (2008) stated that service quality is commonly noted as a critical prerequisite for establishing and sustaining a satisfied relationship with valued customers. In this way, the association between service quality and customer satisfaction has emerged as a topic of significant and strategic concern (Cronin and Taylor, 1992). In general, perceived service quality is an antecedent to satisfaction (Spreng and Mckoy, 1996). Thus, a proper understanding of the antecedents and determinants of customer satisfaction can be seen as to have an extraordinarily high monetary value for service organizations in a competitive environment (Lassar, Manolis and Winsor, 2000).

Perceived quality is defined as the consumer's judgment about an entity's overall experience or superiority (Zeithaml, 1987; Zammuto et al., 1996). Similarly, Parasuraman et al. (1990) also concluded that consumer perceptions of service quality result from comparing expectations prior to receiving the service, and their actual experience of the service. Perceived quality is also seen as a form of attitude, related to, but not the same as satisfaction, and resulting from a comparison of expectations with perceptions of performance (Rowley, 1996).

Therefore, perceived service quality could be the product of the evaluations of a number of service encounters and in the education setting, of a student, these could range from encounters with office staff, to encounters with tutors, lecturers, the head of departments (Hill, 1995). As a result, if an organization regularly provides service at a level that exceeds customer expectations, the service will be evaluated as high quality. In contrast, if an organization fails to meet customer expectations, the service will be judge as poor quality (Zammuto et al., 1996).

Perceived Value

Zeithaml (1988) suggested that perceived value is the overall evaluation that the consumer makes of a product based on perceptions of that given in exchange for that received. Hence, value represents a trade-off between the most prominent components of that given in exchange for that received (Alves, 2010). Various other studies have also adopted this perspective on value (e.g., McDougall & Levesque, 2000; Cronin et al., 2000; Hermawan, 2001; Fornell et al., 1996). Eggert & Ulaga (2002) further included in their value definition the available alternatives, that is, client perceived value is a trade-off between the multiple benefits and sacrifices of a supplier’s range, perceived by the key decision makers in the client organization and resulting in the alternatives available being taken into consideration.

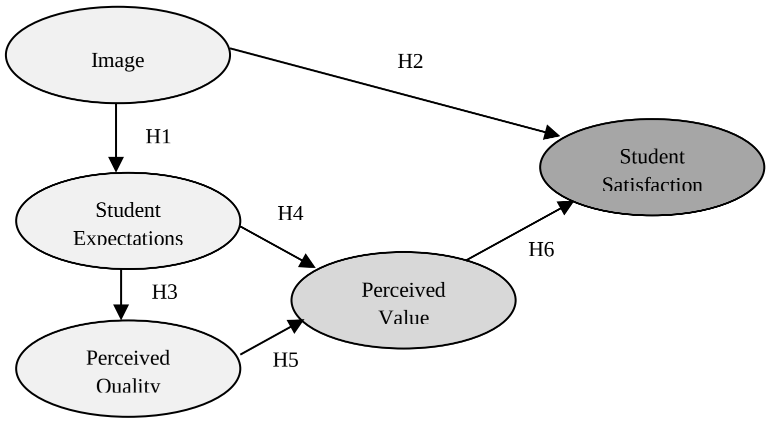
Woodruff (1997) stated that customer value is a customer’s perceived preference for and evaluation of those product attributes, attributing performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in usage situations. According to Alves (2010), this includes the way in which the client conceives value, the value desired and received as well as the connection of the product to its own consequences in terms of consumer objectives, a means-end type model.

Sanchéz-Fernandéz & Iniesta-Bonillo (2006) showed that consumer value is a cognitive-affective evaluation of an exchange relationship carried out by a person at any stage of the process of purchase decision, characterized by a string of tangible and/or intangible elements which determine, and are also capable of, a comparative judgment conditioned by the time, place and circumstances of the evaluation. Ledden et al. (2007) stated that the value perceived by a student is the overall evaluation made of the utility of the service based upon the perception of that received and that given. Brooks and Everett (2009) associated the value of education only to the targets to be reached.

3. Research Model and Hypotheses

SSI model justified in this study has 5 latent constructs: image, student expectations, perceived value, perceived quality, student satisfaction; and contains of 6 relationships. Figure 1 presents the research model with relevant hypotheses.

Figure 1: Research Model



Yavas and Shemwell (1996); Landrum et al. (1998); and Parameswaran and Glowacka (1995) found that the higher education institutions need to maintain or develop a distinct image to create a competitive advantage in an increasingly competitive market. Image is one of the main influences on the willingness of students to apply for admission. Image plays an important role when donors are considering providing funding. Kristensen et al. (1999); Cassel and Eklof (2001) indicated that the image always appears as one of the variables with greatest influence in shaping satisfaction. Alves and Raposo (2007) studied the influence of university image on student expectations, satisfaction, and loyalty in higher education based on the ECSI model. Their results indicated that if higher education is an extremely complex service with features and experiences of faith, which makes it difficult to be assessed, the image of the university has an important influence in shaping the expectations of students in higher education. University's image has a significant influence in the formation of the student's expectations in higher education (Alves and Raposo, 2007). Thus, consistent with results from prior empirical studies, in this study, we propose to test the following hypothesis:

Hypothesis 1: Image has a positive effect on student expectation.

Temizer and Turkyilmaz (2012) developed SSI model to examine the relationship between university's image and student satisfaction. The results showed that image has a positive effect on student satisfaction and thus managers of higher education institutions should aim at enhancing the institutions' image from the eyes of the students. According to Jurkowitsch et al. (2006), the antecedents of student satisfaction derived from service performance, university performance, relationships, and university standing.

Brown and Mazzarol (2008) categorized image dimension into three components - study environment, practicality, and conservativeness. As a research result, they confirmed that the image dimension displayed a strong relationship with satisfaction.

Dib and Alnazer (2013) analyzed the influence of perceived service quality, perceived value, and image on student satisfaction. They tested their model by using the structural equation modelling technique with a sample of 280 students. The findings showed that image had a positive effect on student satisfaction, and the satisfaction had a positive effect on student loyalty, and negative effect on student complaint.

It is observed that prior studies have confirmed a positive relationship between the university image and student satisfaction. Thus, based on the empirical analysis, in this study, the writer assumes a positive impact on the image to student satisfaction. Therefore, the second hypothesis is:

Hypothesis 2: Image has a positive effect on student satisfaction.

When discussing about perceived quality, Temizer and Turkyilmaz (2012) showed that this construct includes perceived educational quality, contribution of social environment to goal, managerial and administrative excellence and fulfilment of education and career goals. Forrester and Parkinson (2004) in their study basing on Servqual model showed the relationship between student expectation and quality perception. Turel and Serenko (2006) studied about the linking student satisfaction and service quality perceptions. In his research, Turel and Serenko (2006) stated the relationship between student expectation and service quality perceptions. Thus, consistent with results from prior empirical studies, in this study, we propose to test the following hypothesis:

Hypothesis 3: Student expectation has a positive effect on perceived quality.

Perceived value in higher education can be considered as the perceived level of service quality at a university in relation to the price paid by the student. In terms of expectancy-value theory of motivation, this can be explained by the value students attach to gains in competences (Bruinsma, 2004; Eccles & Wig-field, 2002). Students' assessments of the importance of specific achievements reflect their mastery goals and their wishes to become proficient in an area. Consequently, students who attach a high value to specific achievements are also likely to invest more efforts in learning, to apply more elaborated information processing strategies, or to devote more time to learning (Bruinsma, 2004; Nurmi & Aunola, 2005). Thus, consistent with results from prior empirical studies, in this study, we propose to test the following hypothesis:

Hypothesis 4: Student expectation has a positive effect on perceived value.

Perceived quality includes perceived educational quality of training programs at universities, contribution of these courses and fulfilment of education and career goals of students (Choi and Kim, 2013). Choi and Kim (2013) showed the positive relationship between quality and value of products/services in the context of social enterprise. In investigating relationships between service quality and customer's perceived value in conventional retailing and online shopping, many empirical studies have pointed out that service quality positively influences perceived value (Cronin et al., 1997; Cronin et al., 2000; Brady et al., 2001; Bauer et al., 2006). Wang et al. (2004) and Turel and Serenko (2006) investigated the mobile services in China and Canada and found out that service quality is positively related to perceived value. Thus, consistent with results from prior empirical studies, in this study, we propose to test the following hypothesis:

Hypothesis 5: Perceived quality has a positive effect on perceived value.

Perceived value is the customer's overall assessment of the utility of a product based on perceptions of what is received and what is given (Zithaml, 1988). Bolton and drew. (1991) showed that a customer's assessment of value depends on sacrifice (i.e., the monetary and nonmonetary costs associated with utilizing the service). Helgsen and Nesset (2007) and Dib and Alnazer (2013) concluded that perceived value has a significant effect on student satisfaction.

Zhang et al. (2008) argued that students' pay-outs are not only money, but also time, endeavors, and other non-price costs to realize the study objectives. They used two indexes including the quality that students spend their individual time, endeavors, and intelligence and the time, and endeavor and intelligence relative to the quality as the observation variables of perceived value (Zhang et. al, 2008). They concluded that perceived value has strong effect on student satisfaction.

Alves (2010) found an index of perceived value by students in higher education, and this perception is affected by age, gender, number of registrations, and field of study and work experience of the students. He also found that student satisfaction is influenced by perceived value. In higher education, the relationship between value and satisfaction has also been studied with the findings that student satisfaction levels were influenced by perceived value (Webb and Jagun, 1997; Hermawan, 2001; Brown and Mazzarol, 2009). Thus, consistent with results from prior empirical studies, in this study, we propose to test the following hypothesis:

Hypothesis 6: Perceived value has a positive effect on student satisfaction

4. Methodology

Data Collection

This study focus on 2 joint master programs organized and administered by International Education Faculty, Foreign Trade University (FTU) in Vietnam. The 2 joint master programs are MIB (Master in International Business offered by La Trobe University, Australia) and MBA (Master of Business Administration offered by Shu-Te University, Taiwan). MIB program has completed 9 courses which include approximately 260 students. However, MBA only has 1 course which includes 23 students. The total participants were 283 students. Questionnaires were sent by to respondents by email. Email survey used to collect the data because it is more powerful, efficient and effective than telephone survey. Besides, personal interviews were used to collect data. Questionnaires were designed in the form of Google document, and launching questionnaires is done by International Education Faculty. With the help of International Education Faculty (IEF), questionnaires were sent via email to 283 participants from 2 joint master programs at FTU. After 14 days from the date of delivering email by IEF, the surveys were collected. At the beginning, 251 questionnaires were collected in which 14 were not fully completed and removed. Finally, 237 questionnaires were used for further analysis. Table 1 summarizes the demographics of the respondents.

Table 1: Profiles of the Survey Respondents

Profile	Item	Count	Percentage
Gender	Male	104	44%
	Female	133	56%
	Total	**237**	**100%**
Age	Less than 30	132	56%
	31-40	89	38%
	41-50	12	5%
	51-60	4	2%
	Total	**237**	**100%**
Marital status	Married	137	58%
	Single	100	42%
	Total	**237**	**100%**
Joint master programs	MBAF4	20	8%
	MIB	217	92%
	Total	**237**	**100%**

Measures

To ensure the content validity of the survey instruments, we implemented an extensive review of the student satisfaction literature and adopt the model of SSI (Temizer and Turkyilmaz, 2012). This model is used to measure the satisfaction of students from different aspects, such as image of the university, expectations, perceived quality, and perceived value. These pilot scales were reviewed by five professors each of whom is directly teaching and playing some administrative positions in their universities; and 10 MBA students who are in the second year of their MBA program. Several revisions were made based on their comments/feedback.

A Vietnamese scholar translated the final version of the questionnaire into Vietnamese. Another researcher, who is fluent in both Vietnamese and English, translated the Vietnamese version back into English to ensure consistency between the English and Vietnamese versions. Then two scholars who are Vietnamese-English bilingual examined both the Vietnamese and the English versions independently and validated that the translation was accurate and consistent. This revised questionnaire was pretested by 20 MBA students, and the scale items were furthered refined based on their comments and suggestions.

The measurement scale contained 6 constructs in which each construct was operationalized by multiple indicators: 7 items to measure Image, 4 items to measure student expectations; 4 items to measure perceived quality; 2 items to measure perceived value; 3 items to measure student satisfaction. Each survey respondent was asked to provide a personal profile, such as gender and educational level, and to rate one’s perception of and experience with learning on a seven-point Likert scale.

Reliability Statistics

Cronbach's Alpha is a statistics used to examine the reliability of constructs. Specifically, variables with Corrected Item-Total Correlation are greater than 0.3 and Cronbach’s Alpha greater than 0.7. Table 2 indicates that Cronbach’s Alpha of Image, Student Expectation, Perceived Quality, Perceived Value and Student Satisfaction are 0.850, 0.837, 0.899, 0.850, and 0.863, respectively. Thus, the 5 constructs with 20 items have good reliability.

Table 2: Measurement Scale Reliability

Construct	**Cronbach's**	**# of Items**
Image	0.850	7
Student expectation	0.837	4
Perceived quality	0.899	4
Perceived value	0.850	2
Student satisfaction	0.863	3
Total		**20**

5. Results

Pearson Correlation

Table 3 shows Pearson correlation for each pair of constructs. The 5 constructs are IM (image), EXP (student expectation), PQ (perceived quality), PV (perceived value), and SS (student satisfaction). "**" indicates significant at 0.000 (<0.001). Thus IM and EXP, IM and PQ, IM and PV, IM and SS, EXP and PQ, EXP and PV, EXP and SS, PQ and PV, PQ and SS, and PV and SS have statistically strong positive correlations.

Table 3: Correlations among Constructs

		IM	**EXP**	**PQ**	**PV**	**SS**
IM	Pearson Correlation	1				
	Sig. (2-tailed)					
EXP	Pearson Correlation	0.759**	1			
	Sig. (2-tailed)	0.000				
PQ	Pearson Correlation	0.723**	0.891**	1		
	Sig. (2-tailed)	0.000	0.000			
PV	Pearson Correlation	0.716**	0.840**	0.863**	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
SS	Pearson Correlation	0.661**	0.825**	0.867**	0.840**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	

Relationship between Image and Student Expectation

Linear regression is used to measure the relationship between Image and Student expectation. Table 4 indicates that Image has a positive effect on student expectation. Sig value in Table 4 determines whether or not the model relatively fits to the data. The Sig value is under 0.05 which means the regression model fits to the data. In addition, Table 4 shows that Sig is at 0.000 (<0.05) and F value is quite high at 319.533. It means that the regression model fits statistically.

Table 4: Regression of Student Expectation on Image

Model Summary		**ANOVA[a]**		**Coefficients[a]**			
				Model	Unstandardized	Standardized	Sig.
R	Adj.	Sig.	F		B	Beta	
0.576	0.574	0.000[b]	319.533	(Constant)	-0.528		0.031
				IM	1.029	0.759	0.000

Adjusted R squared indicates how well data points fit a statistical model. R squared is the square of the coefficient of multiple correlation ranging from 0 to 1. Adjusted R squared is at 0.574 meaning that 57.4% variability of EXP (Student expectation) can be explained by IM (Image).

As for the regression coefficients, IM (1.029) is independent variable while EXP is dependent variable, and constant is -0.528. This results in the positive relationship between Image and Student expectation. Thus, H1 is supported.

Relationship between Student Expectation and Perceived Quality

Linear regression used to measure the relationship between Student expectation and Perceived quality. Table 5 indicates that the Sig value is under 0.05 which means the regression model is suitable with data. Table 5 also indicates that Sig is at 0.000 (<0.05) and F value is really high at 908.001. It means that the regression model fits statistically to the data.

Table 5: Regression of Perceived Quality on Student Expectation

Model Summary		**ANOVA[a]**		**Coefficients[a]**			
				Model	Unstandardized	Standardized	Sig.
R	Adj.	Sig.	F		B	Beta	
0.794	0.974	0.000[b]	908.001	(Constant)	0.173		0.149
				EXP	0.936	0.891	0.000

Adjusted R squared is at 0.794 which means that 79.4% variability of PQ (Perceived quality) can be explained by EXP (Student expectation). As for regression coefficients, EXP (0.936) is independent variable while PQ is dependent variable, and the constant is 0.173. This results in the positive relationship between Image and Student expectation. Thus, H3 is supported.

Relationship between Student Expectation, Perceived Quality and Perceived Value

Linear regression is used to measure the relationships among Student expectation, Perceived quality and Perceived value. Table 6 indicates that Sig value is under 0.05 which means the regression model is suitable with data. Table 6 also indicates that Sig is at 0.000 (<0.05) and F value is at 389.547. It means that the regression model fits statistically to the data.

Table 6: Regression of Perceived Value on student Expectation and Perceived Quality

Model Summary		**ANOVA**[a]		**Coefficients**[a]			
				Model	Unstandardized	Standardized	Sig.
R	Adj.	Sig.	F		B	Beta	
0.769	0.767	0.000[b]	389.547	(Constant)	-0.084		0.554
				EXP	0.404	0.346	0.000
				PQ	0.615	0.554	0.000

Adjusted R squared is at 0.767 meaning that 76.7% variability of PV (Perceived value) can be explained by EXP (Student expectation) and PQ (Perceived quality). As for regression coefficients, EXP and PQ are independent variables while PV is dependent variable. Coefficients of EXP and PQ are 0.404 and 0.615, respectively. This results in the positive relationship between Student expectation and Perceived value, and the positive relationship between Perceived quality and Perceived value. Thus, H4 and H5 are supported. The Standardized Beta value for EXP is 0.346 while the Standardized Beta value for PQ is 0.554. It is concluded that PQ (Perceived quality) is the most important impact on PV (Perceived value).

Relationship between Image, Perceived Value, and Student Satisfaction

Linear regression is used to measure the relationships between image, perceived value, and student satisfaction. Table 7 indicates that Sig is at 0.000 (<0.05) and F value is at 290.381. It means that the regression model fit statistically to the data. Adjusted R squared is at 0.710 meaning that 71% variability of SS (Student satisfaction) can be explained by IM (Image) and PV (Perceived value).

Table 7: Regression Student Satisfaction on Image and Perceived Value

Model Summary		**ANOVA**[a]		**Coefficients**[a]			
				Model	Unstandardized	Standardized	Sig.
R	Adj.	Sig.	F		B	Beta	
0.713	0.710	0.000[b]	290.389	(Constant)	0.464		0.033
				IM	0.174	0.121	0.016
				PV	0.683	0.753	0.000

As for regression coefficients, coefficients of IM and PV are 0.174 and 0.683, respectively. This results in the positive relationship between Perceived value and Student satisfaction, and the positive relationship between Image and Student satisfaction. Thus, H2 and H6 are supported.

The Standardized Beta value for IM is 0.121 while the Standardized Beta value for PV is 0.753. It is concluded that PV is the most important impact on SS.

6. Conclusions and Implications

This study examines factors that have impacts on student satisfaction. Results from regression analyses show that there are 6 positive relationships supported by the data: between image (IM) and student satisfaction; between image and student expectation; between student expectation and perceived quality; between perceived quality and perceived value; between perceived value and student satisfaction. In addition, perceived quality is the most important impact on perceived value; and perceived value is the most important impact on student satisfaction. The results in this study are consistent with that of Temizer and Turkyilmaz (2012), meaning that the SSI (Student Satisfaction Index) model is reliable and valid under the education setting of Vietnam. Based on these results, implications are drawn as follows:

Improving training quality of joint master programs will lead to an increase in student expectation which will have impact on perceived value. Moreover, improving training quality will create value for each course which will also leads to an increase in perceived value. In order to improve training quality, universities in Vietnam should continue innovative joint master courses. The target is to provide the students with a high level of theoretical and practical skills, and train the students to become experts in the field of economics and business administration today. To accomplish that goal, it is necessary to improve the quality of training and to rise up to meet the learning needs of society growing in an intimate relationship between the quality of training and the training scale. There should also be aware that there are many people who learn joint master course. Highly qualified people are more beneficial to society. To satisfy these needs, actions should be taken to enhance the curriculum, the training forms, and complete rules on training. The universities should continue to build applicable programs and teaching methods for joint master courses. In terms of innovating teaching methods, teaching and practice guidelines should keep turning to the form of case studies. Besides, the universities should consider the possibility of importing training programs, as some countries did and was successful.

It is essential to improve teaching ability of lecturers to ensure the quality of joint master courses. It should be noted that lecturers play a key role in the success of joint master programs. The lecturers as the human element are very important in directly affecting the university training process. The human factors are not only the lecturers but also the administrators. Awareness on the role of lecturers and administrators, the universities should build mechanisms of self-studying and self-training for the lecturers. The recruitment process, arrangement and employee treatment need to be executed well to attract and maintain the teaching activities in compliance with requirements of international joint master programs. The universities should focus on building employee attracting policies to create a dynamic and qualified pool of professors, lecturers, administrators, and staff.
The universities need to improve student management. Student management is a prominent activity to promote university image. Student management activities of joint master programs needs to provide information related to programs, regulations of the university, rights and benefits of the students. Student management activities should be able to track personal information about family, address, phone number in the student's records. The lecturer in charge of taking care of the student needs to build an assessment profile about the student's attitude and study results. Student management activities should provide excellent study consulting services. It can be seen that the human element is always an important factor directly affecting the training process. Management and administration of joint master courses should be flexible, enthusiastic, quickly, and friendly. Most of students who attend in joint master programs are still working at the same time, thus they may need help and support during their study. Finally, the universities should keep good relations

with students during and after they study because their feedback and words of mouth are important in order to build the image of the university, and help the university to have more enrollments into joint master courses.

The universities should invest more in modern facilities and equipment for learning and research in order to enhance the university image. In particular, the universities should invest and modernize lecture rooms to serve training programs in general and joint master programs in particular, such as classrooms, conference rooms as well as international standard laboratories. The universities should apply management information technologies in managing faculty, students, and teaching and studying activities more effectively. Purchasing and subscribing to prestigious research data to build database for researchers, lectures, and students are important. Improving libraries for joint master courses which include electronic library and traditional library. However, electronic library should be built such that it is suitable with the international training standards regarding books, textbooks, and international journals. The universities should find our ways to build useful mobilization channels such as enterprises, alumni, funds, partner universities, and domestic and foreign research institutes to have monetary and non-monetary supports for the purpose of enhancing facilities and equipment for training.

7. Limitations and Future Research

This study provides a number of important contributions to international joint master programs conducted by universities in Vietnam. The results indicate that there are 6 positive relationships: between image and student satisfaction; between image and student expectation; between student expectation and perceived quality; between perceived quality and perceived value; between perceived value and student satisfaction. Furthermore, perceived quality is the most important impact on perceived value, and perceived value is the most important impact on student satisfaction. The results in this study are consistent with that of Temizer and Turkyilmaz (2012), meaning that the SSI model is reliable and valid. While to some extent, a number of implications are drawn from this study, there are also some limitations. Firstly, this study focused solely on student satisfaction from joint master courses based on investigating factors such as image, student expectation, perceived quality, and perceived value. There might be other factors that are likely to have impacts on student satisfaction, but not considered in this study.

Secondly, two joint master programs from one university in Vietnam might not be considered as representative for all education programs in general and joint master programs in particular offered by universities in Vietnam. This may limit the generalizability of the results.

Thirdly, this study focused on the perceptions of students and did not measure the perceptions of staff and other stakeholders regarding student satisfaction and other pertaining constructs. It should be noted that measuring perceptions of students on satisfaction, image, student expectation, perceived quality, and perceived value might be different from measuring these under perceptions of different stakeholders.

Last but not least, the statistical techniques in this study are multiple regression techniques which might not be adequate to analyze reliability, validity, and relationships between the constructs. Thus, future studies should take all the limitations into consideration in order to build a more integrative model for better investigating student satisfaction and its determinants of joint master programs in particular and education programs in general offered by universities in Vietnam.

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Determinants of Profit and Profitability of Rwanda Commercial Banks: A Profit Function Approach

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Abstract

The banking literatures on profits and profitability of the bank(s) have used macroeconomic and bank specific performance indicators to predict the profit and profitability of bank(s). Other literatures in the banking research also emphasized with cost efficiencies to determine the profit and profitability. The present study employs the profit function approach by disaggregating the factors into input, output, risk, macroeconomic factors and social factors and examined these factors' effect on profit and profitability of a commercial bank in Rwanda. The relevant data related to the variables are taken from the annual reports of the selected commercial bank for the period between 2001 and 2015. The findings reveal that the employee cost is most significant factor affecting the profit as well as profitability of the selected commercial bank in Rwanda. Followed by interest and non-interest income also contributes to the profit and profitability along with deposit per branch and risk factor namely credit to total assets.

Keywords: Profit Function; Profitability; Commercial bank; Employee cost; Rwanda

1. Introduction

The financial sector is the catalyst agent for the overall development of an economy, especially the commercial banks in an economy contributes the economic well-being of the society by providing loans and advances to the various sectors, individual entrepreneurs etc. The financial sector literature provides a strong evidence on the relationship between growth and positive performance of financial sector especially banking industry and economic growth of a country (Akinlo, Anthony Enisan and Egbetunde, Tajudeen 2010). As of end June 2016, the financial sector was composed of seventeen banks, fifteen insurance companies, eighty-eight forex bureaus, 494 microfinance institutions and

63 Pension schemes including 1 public pension. Banks as a financial intermediary plays a catalyst role in economic growth of a nation. The effect of bank-related variables and economy related variables on bank profit and profitability is studied in both developing and developed nations.

Rwanda's banking systems is kind of oligopolistic market situation and competition between domestic public and private sector banks, and foreign banks. Additionally, these commercial banks need to compete with the microfinance institutions. The main activity of credit and deposit creation by these commercial banks are subject to the earning capacity namely the profitability of banks as well as the bottom line – profit of the banks. The profit and profitability of commercial banks are determined by many factors like size, diversification, risk and ownership type, as well as dynamic effects (J Goddard et al., 2004); capital, cost decisions, operating expenses and labour productivity (Panayiotis Athanasoglou et al., 2005); bank specific variables along with macroeconomic conditions (Guru, B K et al., 2002; Kosmidou, K., et al., 2005; Fotios Pasiourasa and Kyriaki Kosmidoua, 2007; Kosmidou K 2008; A Anbar and D Alper, 2011). J P Hughes & LJ Mester (2008) noted that the different risks are often influence the bank performance. The cost and traditional profit function models ignored the risks and advocated the incorporation of the risk related variables yields interesting insights on the bank performance.

Many of the banking literatures on profits and profitability of the bank(s) have initially used bank specific performance indicators and later macroeconomic indicators also incorporated to find out the most important determinant and predicted the profit and profitability of bank(s). On the other hand, the literatures in the banking industries also emphasized with cost efficiencies. However, there is still dilemma exists which indicators are the better predictors of the bank performance in terms of profit and profitability of the commercial bank. The present study employs the profit function approach by disaggregating the factors into input, output, risk, macroeconomic factors and social factors and examined these factors' effect on profit and profitability of a commercial bank in Rwanda. In the profit function theory, an individual commercial bank is viewed as an economic unit, whose goal is to maximize profits (Mullineaux, DJ 1978; Akhavein, J. D et al., 1997). The profit function allows that the profit of a firm varies by varying both input and output variables (Berger and Loretta; 1997)

In this context, the present study attempt to answer the following research questions (a) are there increase in the performance indicators of commercial banks after the merger and /or entry of private sector and foreign banks into Rwandan Economy? and (b) what are the important determinants of profit and profitability of selected commercial banks in Rwanda?

2. Financial Sector and Economic Growth – An Overview

The panel data result MZA Karim (2000) indicates that bank inefficiency has a negative effect on GDP growth in the short-run while only persistent increases/decreases in bank inefficiency affect long run GDP growth. The results also show that while non -competitive banking market can have positive effect on short run GDP growth, it has a detrimental effect in the long run if concentration persists over time.

J Zhuang et al., (2009) reviewed the theoretical and empirical literature on the role of financial sector development, with a view to deepening understanding of the rationale of development assistance to the financial sector of developing countries. The review leads to the following broad conclusions: (i) there are convincing arguments that financial sector development plays a vital role in facilitating economic growth and poverty reduction, and these arguments were supported by overwhelming empirical evidence from both cross-country and country specific studies; (ii) there are however disagreements over how financial sector development should be sequenced in developing countries, particularly the relative importance of domestic banks and capital markets and, in developing the banking sector, the relative importance of large and small banks; (iii) while broadening the access to finance by microenterprises, small and medium-sized enterprises (SMEs), and vulnerable groups is recognized as critically important for poverty reduction, it is also widely believed that microfinance and SME credit programs need to be well designed and targeted to be effective. In particular, these programs need to be accompanied by other support services such as provision of training and capacity building, assistance in accessing markets and technologies, and addressing other market failures; and (iv) financial sector development and innovation will bring risks, and it is therefore essential to maintain sound macroeconomic management, put in place effective regulatory and supervisory mechanisms, and carry out structural reforms in developing the financial sector.

Medyawati & Yunanto (2011) study analysed the influence of banking development indicators, agriculture sector and manufacturing industry sector on economic growth in Indonesia and to examine the relationships between banking development and economic growth. Based on the two-stage data processing, the research reveals empirical evidence that banking development, agriculture sector and manufacturing industry sector affects the economic growth although the percentage of the contribution are relatively small.

Aurangzeb (2012) studied the contributions of banking sector in economic growth of Pakistan. The Granger-Causality test confirms the bidirectional causal relationship of deposits, advances and profitability with economic growth. On the other side we found unidirectional causal relationship of investments and interest earnings with economic growth runs from investments and interest earnings to economic growth.

Ho SY & Odiyambo NM (2013) examines the dynamic relationship between bank-based financial development and economic growth in Hong Kong. The researcher attempts to answer one critical question: Does the relationship between bank-based financial development and economic growth in Hong Kong follow a supply-leading or a demand-following response. The finding shows that the relationship between bank based financial development and economic growth in Hong Kong is sensitive to the proxy used to measure the banking sector development. When domestic credit provided by the banking sector is used as a proxy for bank-based financial development, a distinct supply-leading response is found to prevail. However, when the banks' deposit is used as a proxy for bank development, a demand following response is found to predominate. These results hold, irrespective of whether the causality is estimated in the short run or in the long run.

Garba Salisu Balago (2014) examines the relationship between financial sector development and Economic Growth in Nigeria. The result shows that development in financial sector variables viz: banking sector credits, total market capitalization and foreign direct investment positively affect economic growth variables – Real Gross Domestic Product.

The thesis of Tsolmon Altantulkhuur (2014) aims to analyse the causal relationship between financial sector development and economic growth in a case of Mongolia. It is found that financial indicators cause economic growth in different time horizons. Among the financial deepening indicators, an increase in broad money drives to economic growth in short term while growth in private sector credit and capital market lead to economic growth in long term. It is emphasized that the improvement in access to the finance followed by economic growth in short term, while financial sector efficiency causes economic growth in long term.

Kapingura & Alagidede (2016) examines the dynamic relationship between financial development and economic growth in South Africa in terms of financial intermediaries and financial markets based structure. The results suggest that financial intermediaries and financial markets have different impacts on economic growth given their different roles in the economy. In particular, there is bidirectional causality between stock market and economic growth. Also, a unidirectional causality from the bond market to economic growth was established. However, as for financial intermediaries, causality runs from economic growth to financial intermediaries.

Celik & Citak (2016) tested the relationship among competition in the Turkish Banking Sector, financial liberalization and economic growth over 1990-2014 period using annual time-series data. The findings suggest that over the study period, competition is positively and liberalization is negatively related to economic growth in Turkey.

3. Financial System in Rwanda

Rwanda financial sector has been growing and contributing to the accelerated economic growth. A number of bank and non-banking institutions, forex bureau, insurance companies and financial services providers consists of financial sector of Rwanda.

A key element of the financial sector growth strategy in Rwanda is creating an enabling environment for financial institutions to provide a broader range of low cost financial services to households and business community as well. This includes savings and deposit products for historically excluded clients, mobile money transfers, mobile and internet banking, agent banking, micro finance. Much of the innovation has come from non-traditional players.

The financial sector was composed of 17 banks, 15 insurance companies, 88 forex bureaus, 494 micro finance institutions, 63 pension schemes including 1 public pension, 3 mobile money operators and a capital market.

As of June 2016, total assets of the financial sector expanded by 13.7%, to reach FRW 3.4 trillion. The size of the financial sector as measured by total assets relative to GDP increased to 55% as of June 2016.

The banking sector was comprised of 12 commercial banks, 3 micro finance banks, 1 development bank and 1 cooperative bank with a total assets of RWF 2.3 trillion. The number of bank branches stood at 1,367 which includes 820 branches of micro finance institutions.

The total assets of the insurance companies stood at RWF 333 billion with a capital base of RWF 238 billion. The pension sub sector was composed of the mandatory public pension scheme and voluntary pension schemes. The voluntary pension scheme comprises 62 complimentary occupational pension schemes and some personal retirement savings accounts managed in-house and by insurance companies.

The Rwanda Stock Exchange Limited was incorporated on October 2005, but it was officially launched on January 2011. The market capitalization stood at USD 3.7 billion dominated by Government bond transactions.

There are three mobile money operators in Rwanda. These operators provide money transfer, deposit and withdrawal, buy airtime, buy utilities, pay for utilities services. There are 6,763,467 mobile money subscribers as on December 2015. Number of transactions by the end of December 2015 stood at 209,132,834 for a value of RWF 1,444,642 million.

4. Earlier Studies

Sudin Haron (2004) noted that internal factors like liquidity, total expenditures, funds invested in Islamic securities, and the percentage of the profit-sharing ratio between the bank and the borrower of funds and external determinants such as interest rates, size of the bank and market share determines the Islamic bank's profitability. However, the author has used OLS based multiple regression method without any classification of determinants as input and output variables of a bank, and risk factors. Athanasoglou et al (2008) found the profitability of Greek Banks are determined by capital, credit risk, labour productivity and operating expenses. By taking into account only internal factors, Rajveer Rawlin et al (2014) identified that business per employee, advances and bank size are the key determinants of profitability of leading banks in India.

Tobias Olweny and Themba Mamba Shipho (2011) described that the bank-specific factors are the strong influencers of Kenya banks' profitability compared to the macroeconomic factors. With Tobit regression analysis, Kiyota, Hiroyuki (2011) and confirmed the results and observation of Tobias Olweny and Themba Mamba Shipho (2011). A similar finding was noted by VO Ongore and GB Kusa (2013). On the contrary, Munyambonera Ezra Francis (2013) revealed that the both bank related and macro factors explains the changes in the profitability of commercial banks in sub-saharan Africa. Evans Ovamba Kiganda (2014) concluded with OLS estimation that the macroeconomic factors are insignificant factors in explaining the variation in Kenyan bank profitability. Susan Moraa Onuonga (2014) analysed Kenyan banks' profitability with internal factors and concludes bank size, capital strength, ownership, operations expenses, diversification do significantly influence profitability by applying GLM regression. Nsambu Kijjambu Frederick (2015) examined the effect of internal factors on Uganda banks' profitability and concludes operational efficiency, asset quality, equity to total assets, ratio of interest income to total income and inflation are the significant factors influences the bank's profitability. With translog cost function, Abraham Mwenda and Noah Mutoti (2011) identified that bank liquidity, profit, loan portfolio quality and bank ownership type have negative effects on cost efficiency. Sanderson Abel and Pierre Le Roux (2016) studied the determinants of profitability of Zimbabwe's banking industry and found that compared to the external factors, the bank-specific factors such as previous year profit, liquidity risk and non- and performing loans.

Eric Kofi Boadi et al (2016) examined the commercial bank profitablity's determinants of Ghana and found that along with macroeconomic variables and bank specific variable, the risk factors like funding risk and bank resilience risk are the important influencers of Ghanaian commercial bank.

An empirical study with regression analysis, Dickson Pastory and Janeth Patrick Swai (2013) found that the banks' profitability of EAC (including Rwanda) is affected by internal factors like total liabilities and deposit, total assets and loan, and shareholders' funds and the external determinants such as bank regulations and interest rate negatively affected the bank profitability. A perception study on financial performance of Rwandan Commercial banks by Magnifique, Ugirase Josiane (2013) concludes that credit related risks are the strong influencers of the financial performance of the commercial banks in Rwanda. Another perception study on financial performance by P Mwangi King'ang'ai et al (2016) found that low transaction cost and market share influence the financial performance indicator namely profitability.

Gisanabagabo, Sebuhuzu, and Harold Ngalawa. (2016) measured the efficiency of Rwanda's commercial banks with a Stochastic Frontier Analysis and concluded that capital is more expensive factor compared to the price of labour.

A bank efficiency study by Berger et al (1993) indicates the main advantages of the application of profit function are: (a) in banking industry, the measurement of output especially results with misspecification and mismeasurement of output variable, the profit function reduces this type of issues; and (b) the profit function clearly specifies the sources of inefficiency. While critiquing the cost-based model for measuring the efficiency of the banks, DeYoung and Nolle (1996) informed that the inefficiency of the bank may misrepresented by this cost-efficiency models and proposed profit-function model. Akhavein et al., (1997) describes that the profit efficiency approach includes the cost efficiency by incorporating the output and input variables and their effect on profit and also noted this approach have received little academic attention. Akhavein et al (1997) empirically estimated the profit function for US banks and found that a failure to produce the output variables level optimally resulted in failing to achieve maximum profit than the input variables.

Berger and Loretta; (1997) argues that the profit efficiency model is superior than the cost efficiency models and explains Profit efficiency accounts for errors on the output side as well as those on the input side.

Maudos et al (2002) emphasizes that the profit function is superior to cost function because it accounts the effect of vector of production in a given industry on both costs and revenues, and describes bank maximises profit by adjusting the amount of inputs and outputs.

5. Theoretical Model and Hypotheses

An attempt is made to empirically test the two models of profit function namely, conventional and risk adjusted profit function.

Under the conventional profit function, net profits as well as net profit to total assets were considered as dependent variable and the following independent variables are input variables, output variables and fixed factors of production. Accordingly, (a) input variables – price of deposit (interest expenses to deposit - P1), and employee cost (P2) were considered as input factors, (b) output variables – interest income (IY); and income from other sources (OY), (c) fixed factors of production – number of branches (B), fixed assets per branch (FAB) and deposit per branch (DB).

Conventional Profit Function:

(1) Net Profit (Net profit to Total Assets) = $a + \alpha_1 P1 + \alpha_2 EC + \beta_1 IY + \beta_2 OY + \delta_1 B + \delta_2 FAB + \delta_3 DB + \mu$

With respect to Risk Adjusted Function, along with input variables, output variables and fixed factors of production, bank's risk factors were included as independent variables namely, Credit to Total Assets (CAT) and Borrowing / Total Liabilities (BTL). The proposed model is as follows:

Risk Adjusted Function:

(2) Netprofit (Net profit to Total Assets) = $a + \alpha_1 P1 + \alpha_2 EC + \beta_1 IY + \beta_2 OY + \delta_1 B + \delta_2 FAB + \delta_3 DB + \lambda_1 CAT + \lambda_2 BTL + \mu$

The hypotheses of the independent variables on dependent variable namely profit / profitability is given in Table 1.

Table 1: Hypotheses

Hypotheses	Variable	Expected Sign
H1a	Interest Paid / Deposits etc. (P1)	-ve
H1b	Employee Cost (EC)	-ve
H2a	Interest Income (IY)	+ve
H2b	Other Income (OY)	+ve
H3a	Branches (B)	+ve
H3b	Fixed Assets / Branch (FAB)	+ve
H3c	Deposit / Branch (DB)	+ve
H4a	Credit / Total Assets (CAT)	+ve / -ve
H4b	Borrowing / Total Liabilities (BTL)	+ve / -ve

6. Methodology

The selected commercial bank is one of the leading bank in Rwanda with as asset value of 580.7FRw billion in 2016(Q1) from 197.7FRw billion in 2010. The shareholder's equity was 31.9FRw billion in 2010 and increased to 104.6FRw billion in 2016(Q1). Apart from the commercial activities, the bank actively involved in social responsible activities by introducing financial inclusion policies, friendly loan policies for the access of education, quality health services, and income generation activities.

In order to test the effect of input, output and risk related variable on profit and profitability of selected commercial bank in Rwanda, the data on (a) input variables such as deposits, interest on deposits, number of employees, salary cost; (b) output variables like interest income, other income; (c) fixed factors of production namely, number of branches, fixed assets, (d) selected risk factors such as credit, total assets and borrowings are taken from the annual reports of the selected commercial bank for the period between 2001 and 2015.

7. Results

The performance of the selected commercial bank is measured with various banking indicators and presented in Table 2. During the period between 2001 and 2015, the deposit of the bank was RWF32718 in 2001 and has increased to RWF384714 with 11.76 per cent, the loans and advances was RWF 313926 in 2015 from RWF19695 in 2001 with 15.95 time increase during the period between 2001 and 2015. IMF Country Report (2011) observed that the concentration of loans and advances with few corporate and institutional clients. It is observed from the percentage change of deposits and loans and advances that the disbursement of loans and advances was 15.95 times compared to that of deposit mobilisation of 11.76 times. The same scenario is found at the national level with all commercial banks in Rwanda that is, during 2014-15 the percentage change of loans and advances was 22.32 per cent whereas the deposit mobilisation was only 11.03 per cent (BNR Annual Report 2014/15). The total assets and branches rose with 11.88 times and 9.38 times respectively during the study period 2001 - 2015.

Table 2: Performance of the Commercial Bank (in RWF million)

Selected Banking Indicators	2001	2015	% change
Deposit	32718	384714	11.76
Loans and Advances	19695	313926	15.94
Total Assets	47223	561226	11.88
Branches	8	75	9.38
Interest Expenses	1058	13727	12.97
Employee Cost	1526	10824	7.09
Interest Income	5803	59967	10.33
Other Income	1048	17710	16.90
Fixed Asset per Branch	168.7	419.79	2.49
Deposit per Branch	4090	5129.5	1.25
Credit to Total Assets	0.417	0.5594	1.34
Borrowing to Total Liability	0.125	0.0403	0.32
Net Profit	724	20484	28.29
ROA	1.533	3.6499	2.38

Note: All figures except (a) credit to total assets; (b) borrowing to total liability and (c) ROA are measured in RWF million

On the major expenditure variable, Interest Expenses has recorded 12.97 per cent and Employee Cost is with 7.09 per cent during 2001 – 2015. With respect to the income side, Interest Income is with 10.33 per cent and income from other sources is 16.90 per cent. The difference between interest income and interest expenses known as interest spread and it is noted from the simple comparison of percentage difference between 2001 and 2015, the variation in interest income is less than the interest expenses that results with a negative interest spread. Thomas Kigabo Rusuhuzwa et al (2016) found that the interest spread of Rwandan commercial banks influenced by operating costs and credit risk. At individual bank level also, the loan portfolio and reduction of operating costs is inevitable to have sizeable interest spread.

Regarding some selected performance indicators, Fixed Asset per Branch, Deposit per Branch, Credit to Total Assets, Borrowing to Total Liability have increased with 2.49 per cent, 1.25 per cent, 1.34 per cent, and 0.32 per cent. The net profit rose by 28.29 per cent between 2001 and 2015 and ROA has increased by 2.38 per cent in the same period of study.

8. Estimation of Profit Function and Discussion

It is noted that out of two input variables, interest cost is not statistically significant and H1a is not supported and employee cost (α_2=-0.866, t = -2.369) is negatively affecting the net profit of the bank's net profit and the co-efficient value is statistically significant and H1b is accepted. Under the competition scenario, the banks need to pay more attention to reduce the costs of every operations of the bank especially the direct costs like employee cost and enhance the labor productivity. It is noted that when other things remain constant, the employee cost significantly affects the bank's net profit that is, for every RWF 100 increase in the employee cost, the net profit reduces by 0.866. This result is not in line with the earlier findings of Athanasoglou, Panayiotis P., (2008) and Samir Abderrazek Srairi (2010).

The Adj.R^2 (0.993) explains the 99.30 per cent of variation of the commercial bank net profit is explained by the selected three factors namely, input, output and fixed factors of production (Table 3).

Table 3: Conventional Function:
Net Profit = a + α_1P1 + α_2EC + β_1IY + β_2OY + δ_1B + δ_2FAB + δ_3DB +μ

	Variable	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	t	Sig.
	(Constant)	-1779.86	3200.898	-.556	.595
Input	Interest Paid / Deposits etc. (P1)	-182.66	415.805	-.439	.674
	Employee Cost (EC)	-.866	.366	-2.369	**.050**
Output	Interest Income (IY)	.214	.052	4.126	**.004**
	Other Income (OY)	.448	.246	1.822	**.111**
Fixed Factors of Production	Branches (B)	127.425	69.667	1.829	**.110**
	Fixed Assets / Branch (FAB)	-1.351	2.344	-.576	.582
	Deposit / Branch (DB)	.480	.441	1.088	.313
R^2	**0.997**	**Adj.R^2**	**0.993**		
F Value	304.064*	D-W stat	3.144		

With respect to the output factors of the bank, both interest income and income from other sources are positively and significantly affect the net profit of the selected commercial bank. The co-efficient value of interest income (β_1=0.214, t=4.126) is positive and statistically significant at 0.01 level which suggests that for every increase of RWF100, the net profit increases 0.214. That is, the selected commercial bank for the study effectively allocates its loans and advances as well as maintains the loan quality among sectors of the Rwandan economy and earns adequate income through interest, which in turn contributes positively to the net profit of the firm. Kosmidou K., (2008) describes, 'Bad asset quality may have a negative impact on bank profitability by reducing interest income revenue and by increasing the provisions costs'. A similar scenario is witnessed with income from other sources. The regression co-efficient of other income (β_2=0.448, t=1.822) is positive and statistically significant at 0.15 level. Hence H2a and H2b are supported with the beta-coefficients of interest income and other income.

On the fixed factors of production, out of three variables namely branches (B), fixed assets per branch and deposit per branch, the co-efficient of branches (β_2=127.425, t=1.829) is positive and statistically significant at 0.15 level and H3a is supported. The BNR Report (2016) indicates, 'as at the June 2016, the banking system had 177 branches (June 2015: 161), 187 sub-branches (June

2015: 196), 183 outlets (June 2015: 164) and 4,342 agents (June 2015: 2,978). The IMF Financial Access Survey indicates that the commercial bank branch per 100,000 adults has increased from 5.5 in 2011 to 6.1 in 2015 which is comparatively lower than other EAC countries – Uganda (3), Tanzania (2.5), Kenya (5.9) and Burundi (2.9).

When the profitability in terms of net profit to total assets considered as dependent variable, the variables of all three factors – input factors, output factors and fixed factors of production are not significantly contributing the profit efficiency of the selected commercial bank of Rwanda (Table 3). However, the employee cost and non-interest income are statistically significant at 0.20 level. It is noted that except H1b, all other hypotheses are not supported.

Table 4: Net Profit / Total Assets = a + α_1P1 + α_2EC + β_1IY + β_2OY + δ_1B + δ_2FAB + δ_3DB +μ

		Unstandardized Coefficients			
	Variable	B	Std. Error	T	Sig.
	(Constant)	3.050	3.605	.846	.426
Input	Interest Paid / Deposits etc. (P1)	-.479	.468	-1.022	.341
	Employee Cost (EC)	-.001	.000	-1.399	**.205**
Output	Interest Income (IY)	-5.041E-05	.000	-.863	.417
	Other Income (OY)	.000	.000	1.448	**.191**
Fixed Factors of Production	Branches (B)	.056	.078	.709	.501
	Fixed Assets / Branch (FAB)	-.002	.003	-.683	.516
	Deposit / Branch (DB)	.000	.000	.404	.699
R^2	0.773	Adj.R^2	0.525		
F Value	3.211	D-W stat	2.594		

The inclusion of risk factors namely, (a) credit to total assets, and (b) borrowings to total liabilities with the conventional profit function enhances the explanatory power of the independent variables on the variation in the net profit of the selected bank in Rwanda. That is, the value of R^2 was 0.993 with conventional profit function and improved to 0.995 in risk adjusted profit function (Table 5). The negative coefficient of the employee cost suggests that the growing expenditure on the employees in terms of wages and salaries along with other benefits negatively affects the profit of the commercial bank.

Table 5: Netprofit = a + α_1P1 + α_2EC + β_1IY + β_2OY + δ_1B + δ_2FAB + δ_3DB +λ_1CAT + λ_2BTL +µ

	Variable	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	t	Sig.
	(Constant)	-6316.794	2958.007	-2.135	.086
Input	Interest Paid / Deposits etc. (P1)	52.410	670.011	.078	.941
	Employee Cost (EC)	-.522	.290	-1.801	**.132**
Output	Interest Income (IY)	.215	.050	4.275	**.008**
	Other Income (OY)	.363	.215	1.687	**.152**
Fixed Factors of Production	Branches (B)	85.830	61.881	1.387	.224
	Fixed Assets / Branch (FAB)	-1.238	2.587	-.478	.653
	Deposit / Branch (DB)	.757	.405	1.869	**.121**
Risk Factors	Credit / Total Assets (CAT)	5491.104	1965.765	2.793	**.038**
	Borrowing / Total Liabilities (BTL)	2570.592	17715.028	.145	.890
R^2	**0.999**	**Adj.R^2**	**0.995**		
F Value	454.934	D-W stat	2.996		

Out of two input factors, employee cost (EC) has negative sign and statistically significant at 0.15 level confirms here too theoretical expectation of negative sign of employee cost effect on the net profit.

It is also noted from the positive but statistically insignificant coefficient of interest paid on deposits that the competitive environment of Rwandan banking system and the perception of the customers on their deposits with the bank is safe and secure results with lower interest paid on deposit which contributes to the net profit of the bank.

Similar to conventional profit function, the output factors – interest income from loans and advances along with income from other operations have positive coefficients and also statistically significant. Out of these two variables, interest income (β_1= 0.215, t = 4.275) emerge as a significant contributor to the net profit of the bank compared to that of other income (β_1= 0.363, t = 1.687). The higher contribution of interest income to net profit is due to (a) higher lending rates of the commercial banks (at the economy level the lending rate is 16.96 as on June 2016) and (b) effective and efficient loan allocation to the sectors and (c) increase in the number of borrowers of loans from the banks. At the national level, it is noticed that the number of borrowers from the financial system has increased from 20,763 in June 2011 to 132,625 in June 2016 and the selected bank for the study as a leading bank could have experienced the same.

Regarding the fixed factors of production, only deposit per branch (β_1= 0.757, t = 1.869) is positive and found to be statistically significant at 0.15 level. With the annual average growth of deposits of the bank 19.71 per cent, the deposit per branch has resulted in positive sign on the bank's net profit.

With respect to the risk factors, the parameter of the credit to total assets of the bank (λ_1= 5491.104, t = 2.793) is as per the theoretical expected positive sign. It emphasizes the commercial bank effectively and efficiently manages the flow of credit into different sectors and able to control the bad loans of the bank. The African studies like Boahene SH., et al (2012) and Kargi HS (2011) noted that the mismanagement of credit resulted in increasing non-performing loans and erode the profit of the bank. The regression coefficient of other risk factor namely borrowing to total liabilities did not have any statistically significance.

Table 6: Netprofit / Total Assets = a + α_1P1 + α_2EC + β_1IY + β_2OY + δ_1B + δ_2FAB + δ_3DB +λ_1CAT + λ_2BTL +μ

	Variable	Unstandardized Coefficients		t	Sig.
		B	Std. Error		
	(Constant)	-3.515	2.159	-1.628	.165
Input	Interest Paid / Deposits etc. (P1)	-.640	.489	-1.309	.247
	Employee Cost (EC)	.000	.000	-.713	.508
Output	Interest Income (IY)	-7.530E-05	.000	-2.050	**.096**
	Other Income (OY)	.000	.000	2.450	**.058**
Fixed Factors of Production	Branches (B)	.028	.045	.626	.559
	Fixed Assets / Branch (FAB)	-.003	.002	-1.685	.153
	Deposit / Branch (DB)	.001	.000	2.483	**.056**
Risk Factors	Credit / Total Assets (CAT)	6.595	1.435	4.596	**.006**
	Borrowing / Total Liabilities (BTL)	17.058	12.932	1.319	.244
R^2	**0.963**	**Adj.R^2**	**0.896**		
F Value	14.408	D-W stat	2.760		

The dependent variable namely profitability of the selected commercial bank of Rwanda is explained the input, output, fixed factor of production and risk factors associated with bank explains 89.60 per cent of variation and the model is also with good fit (F = 14.408).
The parameters of input factors – interest paid on deposit along with employee cost are statistically insignificant. Out of two output variables, interest income (β_1= -7.530E-05, t = 2.050) negatively contributes to the profitability of the bank compared to that of other income (β_1= 0.000, t = 2.450).

Regarding the fixed factors of production, only deposit per branch (β_1= 0.001, t = 2.483) is positive and found to be statistically significant at 0.05 level. Fixed assets per branch (FAB) negatively (β_1= -0.003, t = 1.685) contributes profitability of the selected commercial bank and statistically significant at 0.015 level.

With respect to the risk factors, the parameter of the credit to total assets of the bank (λ_1= 6.595, t = 4.596) is as per the theoretical expected positive sign. The regression coefficient of other risk factor namely borrowing to total liabilities did not have any statistically significance.

9. Conclusion and Implication

The main aim of this research is to understand and comprehend the significant contributor to the profit and profitability of selected commercial bank in Rwanda. Rather cost function approach, the study adapts the profit function approach to find out the significant factor among input, output, fixed factors and risk factors on the profit or profitability. Bank efficiency is estimated with two forms of profit function estimated namely, traditional profit function and risk adjusted profit function.

The results of both function clearly indicates that the employee cost is most important factor affects the profit as well as profitability of the selected commercial bank in Rwanda. This supports the hypothesis H1b and reveals constant and continuous increase in employee cost along with various benefits provided to the employees of the bank directly erodes the profit and profitability of the bank. Indirectly, the productivity of the employees is not at the level of increase in their costs to the bank. The management of the bank has to look into this very seriously and focus on enhancing the productivity of employees of the bank and there is a great scope for studying the employee intensity and employee efficiency of the commercial banks in Rwanda. Of the two output factors, the bank's profit and profitability is positively and significantly influence by the interest as well as non-interest income earned by the bank. Since the Rwandan economy is a developing and steadily growing compared to other counter part of East Africa, it is necessary to have a strongly control on the interest rates by the Central Bank namely National Bank of Rwanda, however, the banks are in need to widen their services to increase the non-interest income.

Out of the fixed factors of the bank, a marginal effect is witnessing with the deposit per branch. The banks need to take necessary steps to mobilize the deposits from the public and device strategies to meet the competition from the microfinance institutions (18 institutions as on 31/3/2017) and SACCOs (416 LICENSED MFIs (UMURENGE SACCOs) and 36 LICENSED MFIs (Non UMURENGE SACCOs) as on 31 March 2017) which are very close to the heart of the rural Rwandans. The deposit mobilisation is a real challenge not only for the selected commercial bank for the study, but for all commercial banks in Rwanda.

The results on risk factors namely credit to total assets and borrowings to total liabilities provides an insight that the bank's credit to total asset significantly influence the profit and profitability of the bank signifies that higher the unproductive credit to total assets affects the profit and profitability of the commercial bank. The proper allocation of loans to the different sectors as well as to the borrowers reduces the credit risk and creates positive effect on the profit and profitability of the bank. The role of BNR and Government of Rwanda in the allocation of loans is inevitable and both can specify how much loan to be distributed to different sectors of the economy.

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Micro-Finance and Entrepreneurship in Developing Countries

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Abstract

The concept of micro-finance has been around since the 1800's and has been more widely used as a tool to encourage entrepreneurship in developing economies as early as the 1970's with the inception of the Grameen bank in Bangladesh. The success of micro-financing however, does have some shortfalls, especially in helping women who often face social, cultural, and educational challenges different from their male counterparts. These social structures often stand in the way for women limiting their ability to become financially independent and empowered. This paper will look at two programs, Ciudad Mujer (CM) from El Salvador and Farmers of the Future (FOF) from Niger Africa to show how micro-financing, coupled with educational/training programs and other comprehensive social programs can help women entrepreneurs thrive in developing economies to overcome the unique challenges that they face.

Keywords: Micro-Financing, Empowerment, Developing Economies, Poverty Alleviation, Ciudad Mujer, Farmers of the Future, Disadvantaged, Rural Women, Social Justice, Sustainable Economic Growth.

1. Background

Women represent half the world's population and are about 70% of the world's poor (B. N., 2013), and yet even today in the 21st century they continue to face challenges that affect rural women in particular the hardest. Many lack access to the various freedoms afforded to men; the right to an education, the freedom to provide for themselves and their families, the freedom to express themselves without repercussion, equal protection under the law, the right to own property, etcetera. "Various individuals contend that women are amid the most poverty stricken, at the greatest risk of vulnerability of the disadvantaged, and consequently helping them should be a main concern in poverty alleviation" (Johnston & Langlois, 2016, p. 366). However, this is not exclusive to developed countries because according to the World Economic Forum "It has been recognized that, even in the developed countries, women continue to experience various forms of discrimination in one form or another" (World Economic Forum, 2007, p. 20). Yet developing countries' economies, in particular, whose citizens face the challenges of poverty in the greatest numbers, can ultimately benefit by finding ways to improve the lives of women and enabling them to participate actively in their economies through entrepreneurship.

While various definitions of empowerment exist for the purposes of this study empowerment implies women's taking control over their lives with the ability to set their own agendas, have the ability to gain skills which leads to increasing self-confidence so that they can solve problems and develop self-reliance (World Economic Forum, 2007). It is both a process and an outcome, that through implication expands the ability of women to make strategic choices about their lives. Microfinance on the other hand "refers to the entire range of financial and non-financial services including skill up gradation and Entrepreneurship development rendered to rural poor for enabling them to overcome poverty" (B. N., 2013, p. 135).

The existent literature considers the importance of microfinancing as a tool for helping the poor but in many cases these programs are not integrated and lack the type of structural support which combined with micro-financing can not only alleviate poverty, but serve as a tool of empowerment. Much of the extensive literature related to micro financing also focuses on grass roots women groups and local support organizations and how these two coupled together can lead to transforming the socio-economic conditions and livelihood opportunities available to women. Few studies, however, consider how public and private partnerships can work synergistically to accomplish a broader appealing and sustainable opportunity for empowering women at all levels of their life conditions, therefore the objective of this paper is to address this partnership and provide two examples of these type of programs.

The paper is organized as follows: Micro-finance as a tool for empowerment. Proposing a Revised model of micro-finance. Experiences from the field: Ciudad Mujer El Salvador and Farmers of the Future Niger Africa, Summary of Findings, and Limitations of Study

2. Micro-Finance as a Tool for Empowerment

While much has been written about micro-financing as a tool for empowering women, the extensive body of literature demonstrates that it alone is not the solution to alleviating the disparity which exists around the world for women. "As documented in the microfinance literature, the effect of microcredit on women's empowerment continues to be debatable" (Johnston & Langlois, 2016, p. 366).

Today, micro-financing has become a commonly used tool in developing countries as a vehicle to enable people who could not secure a loan [through conventional means] to start a business because they lack the collateral, education and/or connections often needed. Micro-Financing represents an "…industry which has around $6.7 billion in outstanding loans to 30 million borrowers and has thus turned into a global business that links global finance with some of the world's poorest" (Lakshmi, Jampala, Kishore & Dokku, 2013, p. 26).

In relation to the world's poor, and "in particular women, and rural women more so are often disadvantaged in many ways because they lack access to credit, education, healthcare, legal rights, political representation, leadership roles, land ownership, and voting rights in many developing countries" (Johnston & Langlois, 2016, p. 367). Although microcredits can help increase the ability to earn income which can help to overcome cultural and power asymmetries there also other studies which contend the opposite. Since the small loans are often controlled by the women's spouses this leads to even more severe subordination and lack of empowerment leading to even greater vulnerability to the patriarchal system of the household and society (Li, Gan, & Hu, 2011). In a study with Grameen Bank clients in Bangladesh, showed that, "57% of female clients saw a rise in spousal verbal aggression since the start of their loans, and a 13% rise in both verbal and physical violence" (Sugg, 2010, p. 32). This is particularly a challenge in countries where the socio-cultural norms have for centuries relegated women to the status of [at best] second class citizens, with little to no rights.

The role that culture and socio-cultural norms plays into women's roles cannot be overlooked as the set expectation for how women are to be seen, heard and treated. Too often setting limits and enforcing norms of conduct in which women contain themselves, are tolerant and passive to any inequity in order to not disrupt the family unity. While domestic violence is prevalent, "people are not aware of it or conceal it due to social stigma" (Dineen & Le, 2015, p. 26). "The unequal status, freedoms and opportunities afforded to women and girls exist to a greater or lesser degree in every society and country, and all too often these are taken for granted as "normal" aspects of society and human relations" (World Economic Forum, 2007, p.10). It is under these conditions that eradicating gender disparity creates challenges for women that can be insurmountable. While micro-financing has had some success the problem often with it is that it uses a unilateral solution like privately funded micro-financing or a consortium commonly known as "self-help group" (SHG) whose intent is primarily providing financing alone. What is needed is a comprehensive training program which takes into account the unique challenges women face in order to help them not only have access funding/credit, but also mitigates these challenges and in the long-term focuses on ways to empower women through legal and financial education, self-esteem, women's health services, engagement and a supportive group environment. It is in essence what the Navajo proverb teaches, "Give a man a fish, and you feed him for a day. Teach a man to fish, and you feed him for a lifetime."

The answer, for impoverished women, does not lie on just micro-financing alone. Micro-financing, is a business and in order to remain salient must be able to lend and recover its loans which can mean that field staff [in order to achieve financial targets] focus on lending without creating a supportive and comprehensive program apt for women. Instances of borrowers feeling overwhelmed by their loan repayment has led to incidents of suicide, for example in, "Andhra Pradesh (India) … borrowers are committing suicide due to the 'usurious interest rate' and 'forced loan recovery' practices of the micro finance institutions (MFIs)." (Lakshmi, Jampala, Kishore & Dokku, 2013, p. 30). Part of the social responsibility of a comprehensive micro financing program should entail "professional and skill development training for poor women to empower them to build capacity, control their loans, reduce poverty, and improve their living standard" (Ali& Hatta, 2012, p. 115). A comprehensive program, therefore, should utilize both private and public institutions who can come together to provide the types of programs needed to encourage women entrepreneurship as a tool for empowerment and economic freedom.

3. Proposing a Revised Model of Micro Finance - A Private & Public Partnership

Those private/public partner organizations who are developing a multilateral comprehensive program which encompasses micro-financing and more, understand that, as posited by Gladwell, "if you want to bring a fundamental change in people's belief and behavior . . . you need to create a community around them, where those new beliefs can be practiced and expressed and nurtured" (Gladwell, 2002). Given the socio-cultural norms that often discourage rural women from being empowered, any program which seeks to create long term change in the lives of these women, their communities and their economy must do so with the cognizant awareness that it must provide some or all of these: education, legal assistance, training, emotional support, medical assistance, counseling services, mechanism to prevent violence against women (stronger laws, counseling services, victim rights) and business training (business startup with permits and contract help; consulting and technical assistance to develop a business plan and/or formalize the business; Marketing & Promotion)

Failure to provide this level of comprehensive assistance reduces the opportunities for successful change in the lives of these women and their communities. The reality is that "giving women loans is not the only thing that has helped them better their circumstances. A lack of money is a large part of the poverty problem, but money is not the only solution. Women who borrow money need a support system, they need training, and they need encouragement…The women have been given the tools to change their lives, but they have also been given the assistance to see that change through. The support for these women is a significant factor in explaining why they are able to do so well for themselves and their families" (Dineen & Le, 2015, p. 35).

The breadth of existing research related to micro-finance as a tool for helping women has demonstrated the following challenges to a profitable enterprise:

- Lack of knowledge of the market and potential profitability, thus making the choice of business difficult
- Inadequate bookkeeping
- Employment of too many relatives which increases social pressure to share benefits
- Setting prices arbitrarily
- Lack of capital
- High interest rates
- Inventory and inflation accounting is never undertaken
- Credit policies that can gradually ruin their business (Kumar, 2013, 233)

Given what is known about micro-financing and women empowerment, it is under this backdrop and using these definitions that two programs, Ciudad Mujer and Farmers of the Future, will be explored to show how these serve as models of entrepreneurship which leads to the successful empowerment of women.

4. Experiences from the Field: Ciudad Mujer (CM) El Salvador

Ciudad Mujer, is a public/private partnership between the Salvadoran government, the Inter-American Development Bank as well as other donors like the Republic of China-Taiwan, Japan's Counter Value Fund and the United States of America government's U.S. Agency for International Development (USAID) which helped with the donations for the initial center in the city of Colón. It was founded in 2011 by former first lady Dr. Vanda, it was created to deal with the large scale social issues of domestic violence against women and femicide in the country of El Salvador, Central America. Known as "New Public Management Model for Equality and Peace" (Pignato, 2015), "Ciudad Mujer, the government initiative …, provides a unique model, which brings together 16 government agencies under one roof, working on economic empowerment, violence prevention and support for survivors, providing sexual and reproductive health and child care services" (UN Women, 2017) and is a program run only by women [where no men are allowed without special permission]. The services offered within the confines of the walls of Ciudad Mujer centers is so broad that "women can do everything from seeking treatment for abuse-related injuries and getting small-business loans to attending talks about eating disorders or taking software development classes" (Zabludovsky, 2016). Currently, they have seven locations and from March 2011 to July 2015 (when they had six centers) they had assisted 867,899 women and provided 2,360,203 services (Pignato, 2015).

Since the Salvadoran government supports this program, it bears the greatest burden of funding the operation of all CM centers. "In terms of its sustainability, this is a system with shared investment in which each institution [of the government] contributes with its human resources and the Social

Inclusion Secretariat contributes with fixed and complementary operating costs. Costs of Ciudad Mujer are less expensive than having the same services fragmented, without a comprehensive approach" (Pignato, 2015, p. 44). The uniqueness of this program from its inception was that it recognized the social normative and cultural barriers that women have to overcome in order to have equal access to all forms of services. It set about bringing together the various government agencies/services under one roof in order to facilitate access without any encumbrance to the common red tape often found in other social/government services which abound around the world and even in developed economies.

This model, as best described by its founder Dr. Vanda Pignato,

> …is a management model that takes as starting point the fact that women have practical or basic needs as well as strategic ones. Basic needs are those related to their condition as human beings and their feminine nature such as health and food among others. Strategic needs are those related to their gender position including services such as training, time availability for their own development, among others. For this reason, we thought of creating a single physical location where the government and other State agencies or institutions could take care of women exclusively, guaranteeing the exercise of their rights, and providing caring and quality services in a context of dignity and totally free of charge, that could not be found in other areas of the public system (Pignato, 2015, p. 35).

The sixteen government agencies located within each of the seven Ciudad Mujer centers are:

- Ministry of Health (MINSAL)
- Salvadoran Institute for the Advancement of Women (ISDEMU)
- National Civil Police (PNC)
- Public Defender's Office (PGR)
- Attorney General's Office (FGR)
- Forensic Medical Institute of the Supreme Court of Justice (IML)
- Banco de Fomento Agropecuario (BFA)
- National Commission for Micro and Small Enterprises (CONAMYPE) of the Ministry of Economy
- Defender of Consumer Rights Office
- Salvadoran Vocational Training Institute (INSAFORP)
- Ministry of Labor and Social Welfare (MTPS)
- Ministry of Agriculture and Livestock (MAG)
- Solidarity Fund for the Micro-Enterprising Family (FOSOFAMILIA)
- National Registry of Natural Persons (RNPN)
- Ministry of Education (MINED)
- Social Inclusion Secretariat (SIS) (Pignato, 2015, p. 59)

As women first arrive at a center they are greeted by a receptionist who in turn gets basic information for the counselor (social worker) who will spend about 20 minutes with each woman to ascertain what services she may need (psychological, a loan, medical, training, legal etc.). Given the coordination of the various government offices within one roof, they are able to promptly provide services which otherwise would be difficult to assess and attain. During this interview phase the counselor motivates the women to participate in the Module of Collective Education to raise awareness on their rights and their empowerment (Pignato, 2015) because ultimately, CM understands that women need to understand their rights.

Among the modules and services women can receive [free of charge] are:

Sexual and Reproductive Health Module: it offers services for the early detection of uterine-cervical cancer and breast cancer, and reduction of perinatal and maternal deaths with special focus on monitoring pregnant women. It also provides dental, nutrition and mental health care as well as health education, among others.

Attention to and Prevention of Violence against Women Module:
It offers services of orientation and guidance, psychological care, police support, monitoring criminal action and protection of the right of maternity, housing, child identity, child support, and other individual rights.

Economic Autonomy Module: It offers labor intermediation services, vocational and technical training courses, supporting entrepreneurship, along with microcredits financing services.

Collective Education Module: It offers courses, workshops, cultural activities, events encouraging reflection, etc., and creates educational material to disseminate human rights and prevention of gender violence. It also works with the surrounding communities.

Child Care Lounge: Ciudad Mujer has a Childcare lounge to enable women to use the different services of the center while there. Children up to 12 years of age cared for by certified care givers. (Pignato, 2015, p. 60)

In some of the centers there are cafeterias which are sub-contracted to one or more of the women clients of CM who operate that café for a period of 1 year (contracted). They have been previously trained in creating balanced diets, hygiene, food prep and storage.

In August of 2016, some of the clients of Ciudad Mujer Colón and Santa Ana were interviewed and their expressions of gratitude towards this program and Dr. Pignato was palpable. Many spoke about how they have learned a skill from which they now earn a living, have a business, feel empowered and are on a more equal footing with their spouses (for those who have partners), have access to medical/counseling services and have a better understanding of their rights. Consequently, many women have forged strong interpersonal friendships based on time spent in classes or training with each other and in some cases, have partnered together to manage/run their businesses. Part of the services CM provides are maximum $500 micro-credits loan and/or equipment, so in some cases clients find that they can do more if they pool their individual micro-loans as startup funds.

Women have been trained in various fields including agro-industry cultivation and production techniques, estheticians, food production, dressmaking, shoe manufacturing, cosmetology, specialized tourist guides, earth friendly cleaning supplies for home and commercial use manufacturers, as well as vocational and technical training as computer maintenance & repair, electricians, industry equipment operator and car mechanics with certifications to enable job attainment. The types of training offered are based on a regional labor assessment needs within the seven regions served by each center. Women are further assisted by the Ministry of Labor offices in resume writing, finding jobs, and if necessary, filing complaints against employers who are violating labor laws.

5. Experiences from the Field: Farmers of the Future (FOF) Niger Africa

The second program is a primary school program for students ages 10-13 years and a women's association which was organized/field tested in 2004. Initially, thirty women were trained to graft and sell high value fruit trees, transforming the village and serving as a spring board for a larger initiative developed between 2011 and 2016. Working with three partners – Eliminate Poverty NOW, Pencils for Kids and ONG LIBO -- with the backing of the Niger Ministry of Education" (Pasternak, 2016) expanded it services to other neighboring villages. FOF manages this program through a two-pronged approach; "…children as well as parents. Among the adults, emphasis is given to empowering women because they invest in education and health and are easier to organize" (FOF Overview, 2016, p. 1) and therefore are a good investment.

It organizes the women into economically sustainable associations who receive 3 years of training, technical support along with small micro-credits. "The Micro credit program provides very small loans ($19 U.S) to women to start a 'business'. Loan recipients use financial support to buy sheep and goats to breed or re-sell at higher prices, buy seeds for vegetable gardens, buy fishing equipment, and sell animal feed. And of course, they pay back the initial loan which, in turn, is loaned out to other women" (Pencil for Kids, n.d.). The importance of the training cannot be diminished as it ensures that each of the participants are competent not just in agriculture, but marketing, budgeting, Return on Investment, disease prevention, crop rotation and sales, in order to earn income and improve their standing within the family and community. Typically, women work as a cooperative of agricultural associations of 15 to 20 members and meet monthly with program administrators to discuss issues and to plan/organize. At least 1 hectare of, "land in close proximity to the school is donated or leased from the village. The project provides access to water and power for irrigation and an initial supply of agricultural inputs. Initially FOF provides money for operations for the first year to get the businesses started: purchase of seeds, fertilizers, plastic bags, compost and various agricultural supplies. Once the women begin generating their own income they pay for the on-going operation of the garden and reinvestment" (FOF Overview, 2016, p. 2). The success of this program hinges on the work with Professor Dov Pasternak, an expert in dry region agriculture who through testing has identified preferred varieties of vegetables well adapted to local soil and climate conditions. They strike a balance between the need to diversify (to reduce agricultural risk and balance supply with demand) with the need to simplify so women can master new agricultural techniques. Since the program focuses primarily on educating school age children [and their mothers], it uses a "combination of classroom learning and practical hands on learning right outside their school doors [school garden] where they learn about agriculture and animal care [tend goats and other farm animals] to give them a sense of the potential that exists in agriculture, that it can in fact be good business" (EliminatePovertyNow, 2013).

It is important to understand that Farmers of the Future serves the land locked region of West Africa [Niger] known as the Sahel, which has a population of 20 million (EliminatePovertyNow2, 2016.). "Over two-thirds of the country falls within the Sahara Desert. In the 2015 UN Human Development Index it ranked dead last out of 188 countries measured and has one of the world's highest population growth rates" (EliminatePovertyNow1, 2016, p.1) Eighty percent of this region's main economic activity is subsistence farming which traps them in a cycle of endless poverty given the climate and limited employment opportunities. This is a region plagued by poor soil, limited use of fertilizer, reliance on rain-fed agriculture, with shrinking plot size (EliminatePovertyNow1, 2016). As a result of population growth land is overused leading to diminishing yields. "They eat virtually everything they grow, leaving little to sell for income and no margin for error. With drought occurring in 2 years out of every 5, their food supply is at constant risk" (EliminatePovertyNow1, 2016, p.1).

The major objectives of the Farmers of the Future program are:

- To change the national mindset towards farming, approaching it as a business and not just a means of survival
- To enable farmers to achieve "Economic Security" not just "Food Security". Farming should provide the means to a better life
- To guarantee an ample supply of nutritious food through small-scale irrigation.
- To empower women and girls
- To speed economic transformation by introducing new concepts and methods simultaneously to two generations, primary school-age children and their parents. (EliminatePovertyNow1, 2016, p.4)

In terms of its success today association members earn over $2,000 per year, 4 times the national average income. Every home has been upgraded, many with electricity. Two hundred students have gone on to secondary school and 7 to university as result of this initiative. According to John Craig, Founder and President of Ending Poverty NOW in their four pilot sites, income has been produced primarily through vegetables. Vegetables are less profitable than fruit trees but demand is far larger. Irrigation is primarily by hand using watering cans. This limits the size plot, which can be farmed to a maximum of about 150 m2/woman and the amount of profit/woman/year to about $500 -- equal to the average annual per capita income in Niger. While this is only half of their goal for the program of $1,000/year it is sufficient to create a profitable and sustainable business.

In order to continue to expand its reach, FOF has continued to work with various stakeholders among them Niger's Ministry of National Education. Additionally, numerous discussions have been held with key government officials. These include the High Commissioner of the "Triple N Initiative", the Minister of Agriculture, senior advisors to the Prime Minister and President, and Niger's First Lady herself (Pasternak, 2016). They recognize the program's potential to address national challenges with poverty, hunger and malnutrition and support its expansion. This reiterates the point that empowering women requires a comprehensive program in joint partnership with various stakeholders working together to help mitigate the social cultural normative barriers, economic and educational challenges faced by women in various developing economies.

6. Summary of Findings

Based on the two field examples provided it is important to note, "…integrated MFIs in cooperation with other non-government organizations (NGOs) can also promote the organization and "empowerment" of the poor, particularly poor women, through a combination of awareness raising, proper training for group members, and other social services for capacity building towards sustainable community development" (Ali& Hatta, 2012, p. 118). A secondary effect of these types of comprehensive programs are the strong interpersonal relationships forged by the women who now can look to each other for support, understanding, guidance, advice and solidarity. For those women who have suffered from abusive relationships, this bonding helps them heal and grow stronger.

Finally, the "research has shown that investing in women offers the most effective means to improve health, nutrition, hygiene, and educational standards for families and consequently for the whole of society. Thus, a special support for women in both financial and non-financial services is necessary" (Kumar, 2013, 232-233), if we are seriously focused on empowering women in developing countries for economic growth. Ultimately, it is a matter of social justice and beyond that is a matter of long term sustainable economic growth for our collective global society. We know the problem exists, but have done very little to make headway, Ciudad Mujer and Farmers of the Future are two examples that demonstrate what can be accomplished.

7. Limitations of Study

The model of Ciudad Mujer now has operations in the countries of Honduras, Paraguay, the Dominican Republic, and is currently being considered by the government of Ecuador. Future studies should interview program participants of these countries and review the data of these locations to ascertain if this program has been able to replicate its success in each respective country.

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The Steroid of Forex Leverage-How the PIIGS Propel the German Export Juggernaut

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Abstract

The formation of the Eurozone and adoption of the Euro as a unifying currency has gone a long way in solidifying the economic prowess of the post-world war II continent. The single currency has cut transactions costs and added fluidity to all forms of intra zone trading. The thrust of this research will focus on the impact that Portugal, Italy, Ireland, Greece and Spain (PIIGS) had upon the export strength of the German economy. The Swiss Franc is considered a surrogate for the DM therefore the authors examine how the Swiss Franc reacted once the Swiss government elected to break its linkage to the Euro.

Keywords: Euro, Deutschemark, Germany, PIIGS, European Union, Foreign Exchange, Balance of Trade

1. Introduction

President of Deutsche Bundesbank, Weidmann (2012) noted that macroeconomic imbalances were central to the Euro crisis. Greece runs persistent current account deficits while Germany runs persistent current account surpluses. Commenting on Weidman's speech Bibow (2013) notes that rebalancing of trade balances is unlikely because it requires Germany to become less competitive since foreign exchange rate adjustments are not an available tool to countries within the Eurozone. Weeks (2012) argues that as much as three quarters of Germany's recovery after the 2008 banking crisis was through export growth led by wage growth suppression. Dullien & Fritsche (2009) identified a disparity in growth and inflation between countries such as Ireland and Spain, which had experienced high growth and high inflation whereas Germany had experienced subpar growth and inflation. They also noted that these disparities were reflected in current account deficits in countries like Portugal Spain and Greece and current account surpluses in Germany. However, Huther (2013) warns that Germany's high concentration on manufacturing, close relationships between industry and service sectors and focus on exports is not a model that can be replicated in countries such as the PIIGS. The literature does not specifically denote the direct economic benefits to Germany resulting from the PIIGS economic downturn. As such this research studies the value of the Euro against other major currencies from 2008 to 2015. Particular attention is given to Germany and PIIGS Balance of Trade. As the Euro provides a common currency for Germany, Portugal Italy, Ireland, Greece and Spain our question is would the German Trade surplus have been different had the Deutsche Mark remained as an independent currency?

2. Background

The Euro was launched on January 1st, 1999, when it became the currency for more than 300 million people in Europe, which is comparable to the size of the population of the United States. For the first three years it was an invisible currency, only used for accounting purposes, i.e. electronic payments. In 1999 national currencies were surrendered and converted at a fixed rate. This move helped to stabilize the monetary zone. At the same time, the fixed conversion rates sowed the seeds of the 21^{st} century economic imbalance, which will be explained in this paper. The institution of the European Union made perfect sense in a hyper connected world. The ability to move freely from one country to another with one passport made travel from one end of the zone to the other a much simpler process. An even bigger advantage was the smoothing of the wheels of commerce as one currency was accepted from the Atlantic to the eastern reaches of Europe.

Prior to the introduction of the Euro, member countries foreign exchange rates acted as the competitive leveling of the field as the stronger economies would normally see their currency rise in value therefore blunting some of the comparative advantage. The greater the export volumes the more demand for the exporters' currency thus driving up the cost of the currency and therefore making the cost in the importer's currency greater. Conversely the weaker economies would normally experience a weakening currency which would in effect make their exports cheaper and thereby preferred by the stronger economies and their currency. By locking the Euro zone countries in at a fixed rate in 1999 that very comparative relationship was frozen in time. Stronger economies with superior products would benefit from a smoothing effect of the weaker economies on the foreign exchange rate of the Euro vs non Euro currencies such as the dollar and the yen. The Deutsche Mark as a stand-alone currency would most likely rise considerably against other countries thereby making German exports more expensive versus other countries with weaker currencies. This research will investigate the appreciation of the yen over the past 40 years and more recently the Swiss Franc when it decoupled itself from the Euro January 15, 2015 and has seen its monetary unit soar in relative value and putting a severe dent in its export market. Weak countries within the Eurozone can no longer devalue their way out of their economic woes, as would be the normal course of events for a pre EU Greece. The paper will cover how exactly the PIIGS do indeed power the German Export machine by impacting the value of the Euro with their inherent economic weakness. A case in point will be the comparison of a VW Passat and a Toyota Camry as an example of the significance of currency weakness/strength as a key component to the competitive superiority of an individual product and economy.

Finally, the investigation will also delve into the investment attractiveness of individual corporations and the countries within which they reside.

The EU and the Eurozone are a significant part of the world's economy rivaling the United States as an economic unit.

Table 1

Data 2015	**EU (28 Member states)**	**Eurozone (19 Member states)**	**United States (50 states)**	**Japan**	**China**
Area (Million Sq Km)	4.3	2.6	9.8	0.4	9.6
Population (Millions)	508	339	321	127	1,367
GDP ($ Trillions)	$18.6	$11	$17.5	$4.8	$18.1
Share of World GDP	20.6%	12.2%	15.9%	4.4%	16.6%
GDP/Capita Euro thousand	40.6	29.8	42.1	28.2	9.2

Source: "ECB: Structure of the euro area economy". The World Factbook - CIA (Data for 2015)

By the time the Eurozone was in full swing the economies of member states had begun to diverge. In looking at country economic indicators for Germany and PIIGS it is evident that the size of the Eurozone economy conceals significant difference within the members of the zone. Germany, benefited from US post war investment under the Marshal plan, developed their manufacturing base, established a reputation for quality goods specialized in high value services like banking and insurance and, despite the economic strains of reunification in 1990 had and still has a strong economy. Northern European countries tended to follow the German model.

By contrast, southern European countries relied more heavily on agriculture and tourism. The economic crisis of 2008 was particularly devastating for the PIIGS. In 2010, German GDP declined by 5% compared to an 8% decline in Greece. However, Germany recovered to a growth rate of 4% in 2011 and has remained positive whereas Greece has yet to achieve a positive GDP growth rate (World Bank Annual GDP Growth %).

Table 2

Data 2015	**Germany**	**Greece**	**European Union**
Agriculture	0.7%	3.9%	1.6%
Industry	30.2%	13.3%	24.3%
Services	69.1%	82.8%	71.2%

Source: The World Factbook - CIA (Data for 2015)

Since the valuation of the Euro depends on the collective economic health of the Eurozone – the struggles of the PIIGS resulted in a lower valuation for the Euro.

The Euro also suffers from several structural differences from the US dollar, which adds to its instability. The US dollar economy is centrally controlled – the Federal Government is the major taxing authority and has the ability to redistribute wealth from “rich” states to “poor” states. In the EU there is no central taxing authority and states negotiate how much to contribute to the EU. The bailout of Greece by Germany was a tactical measure not part of the regular political process.

In addition, most member states accept responsibility for services such as universal socialized health care, free higher education and generous unemployment and pension payments which are not provided by the United States Government. Such payments are funded from internal taxes within the member states so there is no standard subsidy from “rich” countries – like Germany to “poor” countries – like Greece without IMF-like austerity requirements.

3. Where would the DM be Today?

The Deutsche Mark had a relatively short life. It was the official currency of West Germany from 1948 to 1990 and of the unified Germany from 1990 until the introduction of the Euro in 2000. It became a reserve currency and indeed became the second largest component of reserve currencies after the US Dollar. When currencies join the Euro their exchange rate becomes fixed. The official exchange rate for the Deutsche Mark, fixed on December 31, 1998 was 1.95583 to the Euro.
It is therefore possible to show what the effective exchange rate for the DM has been since the introduction of the Euro by simply applying this exchange rate to the Euro.

From close to parity with the USD in 2000 the Euro rose to close to $1.60 prior to the financial crisis of 2008. From there is has trended down to approximately $1.10 in 2015 a loss in value of almost 35%. (FXTOP)

In the same time period the effective value of the DM (based on the fixed exchange rate at date of accession) has gone from $0.5 in 2000 to above $0.8 prior to 2008 to $0.55 today, as a result of the decline in the value of the Euro. (FXTOP)

The 35% drop in value of the DM against the USD from 2000 to 2016 has accompanied a 5-fold increase in the monthly trade balance from under 5 billion Euros in 2000 to 25 billion Euros in July 2015, (Trading Economics). However, this derived valuation of the DM is dependent on the overall valuation of the Euro. We have argued that the value of the Euro has fallen largely as a result of the economic problems of the PIIGS. The boom in German exports, which would likely have increased the value of an independent DM, has instead been assisted by the decline in value of the Euro.

It is not possible to observe directly what the true value of an independent DM would have been post 2000, therefore the authors have established the Swiss Franc as a surrogate currency. Like the DM, the Swiss Franc has long been considered a “safe haven currency” since Switzerland had low inflation and, until it was terminated in 2000, the Swiss Franc was also backed by 40% gold Reserves.

4. The Swiss Franc as a Surrogate for DM

The Swiss Franc was introduced as the official currency of the Swiss Confederation in 1850. The Swiss Franc is a reserve currency but only represented 0.3% of official foreign exchange reserves in 1998 compared to 13.8% for the DM. Nevertheless, the Swiss Franc has long been considered a “safe haven currency” since Switzerland had low inflation and, until it was terminated in 2000, the Swiss Franc was also backed by 40% gold Reserves.

Switzerland, like Germany, has enjoyed an increasing positive balance of balance of trade, which has grown steadily since 1990. Both are northern European industrial and financial economies vastly different from the PIIGS, which are predominately agrarian and tourism based. Switzerland is landlocked by the EU and has therefore had to manage its exchange rate to make exports to surrounding EU countries competitive, using monetary policy to their advantage, which has resulted in negative interest rates from 2015.

Nevertheless, the Swiss Franc has appreciated substantially against the DM (or the DM component of the Euro) in particular after the financial crisis of 2008. The financial crisis had a severe impact on the PIIGS dragging the Euro down against other major currencies. The parallel decrease in interest rates in the Eurozone has done little to abate the relative strength of the Swiss Franc.

5. Case Study – The Swiss Franc

Perhaps the most elegant way to view a German economy Post–Euro is to purport how that economy would function Pre–Euro. In order to do so we must somehow calibrate how an independent Deutschmark would behave given the current economic environment. In order to attempt this, we will link the German currency with a similar independent currency. In that regard we chose the Swiss Franc. According to the CIA fact book, Germany had an approximate $ 3.8 Trillion GDP with 1.6% growth as of 2014. The Swiss Economy, by comparison, had a GDP of $ 473 billons with growth of 1.9 % during that same period. Adjustments must be considered regarding the different economic drivers of both economies. The Germans enjoy near legendary status in the engineering field. Switzerland, of course, is a banking giant. What we found was, that adjusting for size, both economies are parallel. Perhaps that is because of their proximity and cultural resemblance to each other.

To that end, Germany's GDP is comprised of over 30 % in Industry and 68 % in Services, generating $1.49 Trillion in exports. The Swiss by comparison is smaller yet closely aligned with 26 % of GDP driven by Industry and 73 % by Services. The greatest difference is Switzerland's relative size with the Swiss exporting at a rate of $327 Billion. In many respects both economies seen through this prism seem quite compatible.

In light of this simulation we focused on a seminal moment in the Franc's history, the dramatic unpegging of the Swiss Franc to the Euro in January of 2015 by the Swiss National Bank (SNB). The Economist noted that the Swiss National Bank introduced an exchange rate control in 2011 capping the Swiss Franc's appreciation against the Euro. Investors have traditionally looked upon the Swiss Franc as a safe place to invest much like US Governments Bonds. The Swiss Franc is attractive to investors because they trust the Swiss Government, which runs a balanced Budget. However, the attractiveness of the Swiss Franc, particularly after the financial turmoil of 2008, attracted many investors, thus pushing up the value of the Swiss Franc against other currencies but most importantly against the Euro. The appreciation of the Swiss Franc against the Euro threatened Swiss exports by making them more expensive to importing countries. Swiss exports of Goods and Services account for over 70% of GDP. In order to bring down the Swiss Franc's value the Swiss National Bank created new Francs and by increasing the supply of Francs the Foreign Exchange markets caused the value of the Swiss Franc to fall to the target range of 1 Euro = 1.2 Swiss Francs. As a result of this policy the Swiss National Bank had accumulated about $480 billion in foreign currency reserves, equivalent to 70% of Swiss GDP.

On January 15, 2015, without warning the Swiss National Bank dropped the policy, which had maintained a cap in value of the Swiss Franc versus the Euro. The Swiss population had become frustrated with the accumulation of foreign currency reserves, and had become apprehensive that increasing the supply of Swiss Francs could lead to hyperinflation. Such fears were possibly exaggerated, because in general the rate of inflation in Switzerland was too low, not too high. However, a referendum the previous November, had it passed would have restricted the ability of the Swiss National Bank to increase reserves. In addition, the European Central Bank was considering "quantitative easing" By increasing the money supply in order to purchase government debt of Eurozone countries it would have the effect of reducing further the value of the Euro and putting even more pressure on Switzerland to maintain the cap. A further consideration was that in

2014 the Euro had declined against other major currencies so that by pegging the Swiss Franc to the Euro the Swiss Franc also fell against other major currencies. In 2014 the Swiss Franc fell by 12% against the US Dollar and 10% against the Rupee. The cheaper Franc booster exports to America and India, which together make up 20% of Swiss exports. This suggested that the Swiss Franc is not overvalued and so it did not make sense to further weaken it. (The Economist explains "Why the Swiss unpegged the franc" The Economist 1/18/2015).

From 2011 to 2014 the Swiss Central Bank capped the Swiss Franc with respect to the Euro in effect pegging the Swiss Franc to the Euro. This reduced volatility in the Swiss equity markets. Due to the Swiss Central Bank's policy of holding gold reserves it also created a situation similar to 1970's United States when the US dollar was linked to gold reserves. Thus speculators such as hedge funds could speculate on the Swiss Franc secure in the knowledge of Swiss Central Bank policy. The Nixon administration took the US dollar off the gold standard and imposed import tariffs. At the time it was seen as protectionist but was successful in addressing inflation. When the Swiss abandoned the link to the Euro it too became a currency whose valuation was more closely related to the fundamentals of its economy (Federal Reserve).

Ironically Germany's ties to the Euro achieve the same aim. The German economy enjoys a devalued currency supporting a vast export position while giving nothing up in terms of branding and goodwill that is usually associated with a weak currency. The German Economy is still seen as an industrial power tied to a currency that is being pulled down by its weaker brethren, namely the PIIGS countries. One has to wonder that given the Swiss scenario would the Germans have followed a like devaluation of the Deutschmark? This would be a sound tactic if Germany was independent of the European Union in order to compete in the current global economic malaise.

Lastly one other potential bright spot of a non-EU Germany might have been the better protection of its major banks. Deutsche Bank has suffered massive losses due to the fact that it had turned into more investment bank than bank. As reported in "Foreign Policy," in regard to its recent financial afflictions:

> "For most of its history, Deutsche Bank was the most typical, most representative, and most prestigious German bank. Founded in 1870, before there was even a German state, its very name seemed chosen to signal a highly ambitious program — both political and economic — for the future. Its original mission was largely trade finance, helping to promote the German export machine, and it rapidly required a network of foreign branches."

But the bank's focus almost immediately turned to industrial finance. Deutsche Bank developed a unique business model, in which it became the key player, a sort of planning center, in the development of German industry. Germany was quite poor at the time and, as a consequence, lacked functioning capital markets. Rather than attempt to correct that deficit, Deutsche Bank exploited it. The bank lent to industrial customers, and at a propitious moment would convert its short-term lending into long-term securities — bonds or equity shares. Sometimes it would sell those securities to retail customers. But often the bank used them to seek proxy-voting rights, so that the bank's management could continue to guide the firms to which it had lent. Bankers from Deutsche routinely came to sit on the boards of the companies with which they were engaged. They often restructured these businesses, and arranged mergers and takeovers.

The modern structure of the German automobile industry is, for instance, in large part a result of the efforts of Deutsche Bank, which pushed Daimler and Benz into a merger in the 1920s, and in the 1950s tried a similar exercise with Daimler-Benz and BMW (but failed). In the 1960s, Deutsche managed the privatization of Volkswagen, in a complicated transaction that still maintained a substantial amount of state control (through the state of Lower Saxony). For large stretches of postwar history, Deutsche Bank owned a substantial stake in Daimler." ("Deutsche Bank Isn't Deutsch Anymore" FP 2/24/2016 by Harold James).

Perhaps as an independent Germany, their policy makers would have been more circumspect in regard to the aggressive dealings of one of its major financial institutions. Thus we can conclude that independent of the Euro, and given the current weak economic environment, the Germans would have benefitted from a Swiss currency strategy of a weakened Deutschmark. Furthermore, the banking sector would be less stressed, as German central bankers would have been reluctant to expose its financial institutions to aggressive trading and banking schemes.

Overall we can see that despite monetary policies and an exchange rate ceiling designed to slow the growth of the Swiss Franc against the Euro it was ultimately a futile endeavor. This strongly suggests that were the DM still an independent currency; its value would be higher than that implied by the valuation of the Euro – driven by the German Export juggernaut.

6. Conclusion

From the financial crisis in 2008, the Euro has seen a rapid depreciation, which appears to be primarily due to the weakened economies of the PIIGS. At the same time German exports have surged – something that would likely have been slowed by an appreciation of an independent DM. The 35% drop in value of the DM against the USD from 2000 to 2016 has accompanied a 5-fold increase in the monthly trade balance from under 5 billion Euros in 2000 to 25 billion Euros in July 2015.

Had the DM remained independent of the Euro the strong trade balance would likely have caused an upward revaluation of the DM, which would have had a negative impact on exports. To take just one example, the 2016 VW Passat had a Manufacturer's Suggested Retail Price (MSRP) of $22, 440, which made it competitive with the MSRP of the 2016 Toyota Camry of $23, 070. For example, had the DM remained independent and its exchange rate with the dollar increased by 15% compared to an actual decline of 35% the implied MSRP of the Passat in the US would have been 50% higher. A MSRP of $33,660 for the Passat (at an exchange rate of USD/EUR of 1.65) would make it difficult to compete with the $23,070 for the Camry leading to reduced exports.

It is therefore our conclusion that the economies of the PIIGS have played a major role in the devaluation of the Euro enabling the German export juggernaut to continue, enhanced by the favorable Euro foreign exchange rates.

7. Practical Implications of the Conclusion

7.1 Performance of Yen versus Deutsch Mark and USD

The foreign exchange rate between a pair of currencies is essentially a zero sum game. The strengthening of one currency against another is the same as the weakening of the second currency against the first.

The rate depends on relative supply and demand for the currency, which in turn is dependent on external drivers i.e. relative trade surplus or deficit as well as internal measures i.e. monetary policy, relative interest rates, money supply and political stability.
However, the US dollar represents 87% of currency trades and as such it is plausible to look at the relative performance of currencies versus the US dollar to estimate their relative performance. Note

that since each currency trade involves two currencies this is 87% out of a total of 200%. Bank for International Settlements (BIS). Triennial Central Bank Survey. Foreign exchange turnover April 2013 preliminary global results Monetary and Economic Department September 2013. (BIS)

Prior 1973 the Yen traded at 360 to the Dollar. Since then the Yen has greatly appreciated hitting highs of approximately 76 to the Dollar in 1995 and 2013. However, by the end of 2015 it had fallen to 120.5. This is a result of the rapid industrialization of Japan following the Second World War and the success of “Japan Inc.” in world trade.

Against the DM, the Yen hit a low of 145 in 1981 but has greatly appreciated since then reaching a high of 45 in 2001 and 49 in 2013. By the end of 2015 it had fallen again to 67. This relative gain in value of the Yen against the DM made Japanese exports relatively more expensive than German exports, meaning that in order to offer comparative pricing on foreign markets, the Japanese would have to cut their prices to stay competitive and thus absorb lower margins. Alternatively, they could maintain their margins but the higher prices would result in fewer sales and therefore less revenue. In general, international companies will prefer to maintain their market share in countries like the US even if it means reduced margins.

7.2 Implications for International Investment

If a US investor wishes to invest in a foreign market he needs to look at his total return. This is composed of the rate of return achieved in the foreign market plus or minus any appreciation or depreciation achieved in foreign currency invested. Thus if the foreign currency depreciates against the USD the investor will be able to buy fewer USD with the proceeds from his investment. The investor can of course hedge his foreign currency exposure by buying a forward foreign currency contract or a foreign currency call option. However, the general downward trend in the Euro since 2008 and the failure to implement structural changes to the Eurozone makes it likely that the investor will look for higher returns from his Eurozone investment making foreign investment harder to obtain. A US investor into Japan would also have to take into account a decline in USD/YEN exchange rate (from 75 in 2012 to 125 in 2015). However, predicting future exchange rates is largely dependent on the economic performance of Japan, which is estimable. The risk of a catastrophic collapse of the Euro due to the debts of the PIIGS makes the future of the Euro much less predictable.

7.3 Future Research Opportunities Post- Brexit

On 23rd June 2016 the UK voted in a referendum to leave the EU (Brexit). In the immediate aftermath of the referendum stock markets around the world crashed as investors moved to perceived less risky investments such as bonds and precious metals. Both the Pound and the Euro dropped precipitously in value as investors moved to the safety of the US Dollar. Uncertainty concerning the ultimate ramifications of Brexit hang over the Eurozone like a dark cloud. Could Brexit lead to changes in how the EU is organized, leading to greater or lesser centralized government? Could Brexit lead to the break-up of the EU or of the UK if Scotland were to secede? For the UK, negotiations could lead to the Norwegian model, which essentially would mean effectively remaining within the EU, retaining free movement of people and capital and financial obligations to Brussels but without any say in how EU policies are decided. At the other end of the spectrum of possible outcomes, total disengagement from the EU might lead to significant trade barriers with the UK’s largest trading partners. The Euro is entering a new phase. The Brexit referendum marks a watershed in European and international relations. Can the German export juggernaut survive Brexit? As Brexit plays out the authors will remain focused on Germany.

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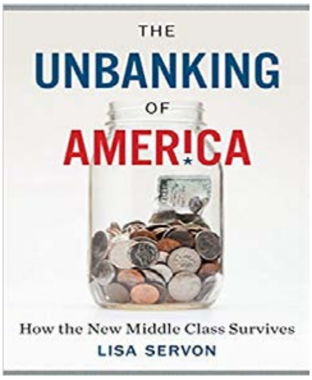
Book Review



The Unbanking of America:
How the New Middle Class Survives
by Lisa Servon
New York: Houghton Mifflin Harcourt, 2017

Reviewed by: Mark J. Kay, Montclair State University

Banks regularly gouge customers with their absurdly high fees and overdraft charges, often motivating many consumers to forego the services of these institutions entirely. Check cashers, payday lenders, and credit alternatives have sprung up in the wake of the growing financial instability of many Americans, often making things worse. In this concise, engaging, and readable book, Servon investigates the institutional foibles of financial systems and the expanding income volatility of Americans. She goes undercover, first as a teller at RiteCheck, a check-cashing business in the South Bronx, and then at a payday lender in Oakland, California. She discovers how the mainstream bank-centered view of economic stability has become completely outdated, and explores the problems of financial insecurity spreading among the middle class.

Servon certainly delivers a forceful criticism of America's banks for their lack of transparency or authentic customer concern. The story is far more engaging than an academic polemic, however. Sevron compassionately explores financial struggles among, for example, contractors dependent on short-term credit. She observes high fees charged to the disabled that are needed for simple bill payments and account withdrawals. She also examines why people elect to pay high fees and dispels the idea that all of these lenders are necessarily predatory and odious.

Several financial issues are looming. For example, in 2014, Americans paid nearly $32 billion in overdraft fees. While clearly avoidable with better systems, such costs are hardly likely to decline. There is clearly much more scrutiny needed on banking systems today that thrive on predatory practices that marginalize hard-working individuals that have nowhere else to turn.

The book concisely delivers the critical facts needed to inform public policy dialogue and avoid the destabilizing policies the led to the financial problems of the 2008 recession. While the economy has surely recovered, Sevron further explores current issues of the growing financial insecurity of the "new middle class" that need close attention. Support is obviously needed for financial oversight, including that of the Consumer Financial Protection Bureau.

While the book is accessible to all, academics should not ignore it. Clearly there is an important need for economists to recognize the controls and regulations needed to insure a safe and effective banking system. As a highly competent academic, Sevron supports assertions accurately with sources cited in the notes, references, and reinforcing research. The book is also recommended reading for marketers interested in enhancing services, managers coping with workforce concerns, and especially by entrepreneurs willing to developing better technologies to launch far better and more affordable financial services.