Gender innovation through the lens of effectuation

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Gender innovation through the lens of effectuation

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Abstract: Today, the strength of firms is embodied in their capability to survive within an increasingly competitive environment, or face failure. Innovation is studied by scholars at different levels of analysis in firms, including gender. Some consider ‘innovation’ to be a revolution in the world of new ideas and concepts, whereas others focus on innovation adoption. In this effort to pursue the missing variables, it might be useful to adhere closely to Sarasvathy’s (2001) concept by examining the role of effectuation between males and females through an in-depth quantitative study in a Lebanese media small and medium enterprises. In a paternalistic society, supported long-rooted habits and norms, this study seeks to examine gender innovation through the lens of effectuation, and whether this relationship leads to positive outcomes in the firm’s performance and its innovative capability. The results clearly stand out with respect to effectuation and innovation in this media service enterprise.

Keywords: effectuation; gender; innovation; creativity; service; small business.


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1 Introduction

Nowadays, the criterion for survival hinges upon the ability to innovate. It is this capability that ultimately determines whether a company is able to assure its viability (Boyne et al., 2003; Walker, 2004). Innovation, whether in the form of services or products, is crucial, and can either be a gradual add-on or even drastic and far-reaching.

Organisations – especially those involved in the media world – are confronted with an exigent business environment quite dissimilar to the one that existed a decade ago. Companies now risk the loss of their position in the market, and should remain endlessly vigilant regarding the ever increasing rate of competitive innovation. Although, Lebanese men and women are in a dynamic movement in the market, nevertheless, their working life is segregated both vertically and horizontally. From this standpoint, the business sector in the Middle East is increasing focus on the relationship between gender and innovation in respect to product, labour and financial markets. Thus, the importance of the topic, gender and innovation, led a number of countries to start a fund for the research in research and development programs, and in the field of women’s entrepreneurship. The study at hand concentrates on a leading firm in the realm of media in Lebanon. The reasoning behind such a decision lies upon an important factor related to the special circumstances in which media firms operate in Lebanon such as uncertainty and the constant need to expect and embrace economic, political, and regional changes. As a result, all efforts are directed towards a privately owned television station that conquered global dimensions in 1996, and is currently one of the widely recognised innovator channels in Lebanon. The curiosity of the researchers has also incited them to investigate this topic. This inquisitiveness was aroused after reviewing the literature and discovering a gap regarding the role of effectuation and its impact on innovation in the media sector. This gap led to the formulation of a research question inquiring about the role of innovation performance in service firms and the impact of effectuation on performance.

This paper puts forward a perception to find out whether effectuation plays as a key driving role for innovation. So, it starts by investigating the various configurations of effectuation, and the literature on innovation (Part 2), followed by a practical field investigation in the media industry. As for the methodology of the work, it applies a positivist, quantitative methodology. Data analysis and statistical methodology are presented in the third part. The fourth part highlights the results. This manuscript concludes with the discussion of the results, limitations, managerial relevance, and the implications of the research.

2 Literature review

The inquisitiveness of the researchers led to the review of the available literature on both topics, effectuation and innovation in the service industry of media.
2.1 Effectuation

Effectuation is defined as a learning process consisting of special techniques, skills and heuristics (Sarasvathy, 2008). It is a form of ‘uncertainty’ (Knight, 1921), and expertise (Sarasvathy, 2001) from empirical studies of entrepreneurship. Effectuation is a “general theory of decision-making in uncertain situations” [Sarasvathy, (2008), p.227] and is concerned with human actions as a “predominant factor shaping the future” [Sarasvathy, (2008), p.87]. Here, effectuation emphasises the selection between various effects and favors control over prediction, i.e., “to the extent we can control the future we do not need to predict it” [Sarasvathy, (2001), p.251].

In her work, The Sciences of the Artificial, Simon (1981) presents effectuation as a process that is suitable for situations and environments with uncertainty, i.e., where the manager is seeking a new venture and cannot predict the results of his future actions. It is then a series of heuristics for decision-making in an uncertain milieu. Since effectuation is referred to as a process or a set of ‘means’, causation logic is suitable to a predictable future and procedures that “takes a particular effect as given and focuses on selecting between means to create that effect” [Sarasvathy, (2001), p.245]. In other words, effectuation can be considered as “the inverse of causation” [Sarasvathy, (2008), p.22].

Effectuation logic is the subject of growing attention in theoretical discussions related to psychology (Sarasvathy, 2003) as well as management (Sarasvathy, 2001; Augier and Sarasvathy, 2004) and economics (Dew et al., 2004). Furthermore, this concept is being extended to address innovation issues (Dew and Sarasvathy, 2001) and finance (Sarasvathy and Wiltbank, 2002).

In her book, Sarasvathy (2008) gives the example of a chef cooking a meal in an attempt to illustrate the inverse relationship between effectuation and causation. To prepare a menu, the chef has two alternatives: in the causal logic, he knows the menu very well and buys the ingredients needed. In the effectuation logic, the chef looks in his kitchen for ingredients and utensils to prepare the menu and these are the ‘means’ that sometimes materialise and develop as he is preparing the food. To summarise, the effectual chef begins with his kitchen, using its contents and comes up with original meals, sometimes unintentionally. It is necessary here to add that an individual can use both the effectual and causal logic interchangeably depending on what the situation calls for. Professional people are capable of using both methods very well (Gustafsson, 2004).

But in the initial stages of a new venture, effectual acting is preferable to causal reasoning due to the high uncertainty level in new ventures (Sarasvathy, 2008). This is one characteristic of a start-up situation, and lack of resources; is another characteristic of a new venture (Bhowmick, 2010).

2.1.1 Principles of effectuation

Sarasvathy and Dew (2005) present five principles or dimensions for effectuation; namely design, means, partnership, affordable loss, and leverage consistency. Each of these principles depicts an approach to problem-solving that relies on the impact of individual creativity, not on prediction. From this standpoint, new ventures are examined through the lens of effectuation, as the latter can provide some useful tactics in the decision-making process to reduce the impact of uncertainty. The first effectual principle of design provides good guidance for entrepreneurs to assimilate the effect of their
activities on the maximum outcome of the surroundings. Second, the means dimension sheds light on the direction of the decision-maker by suggesting that good opportunities appear from contacts, knowledge, the emphasis of this research and eligible resources. Third, partnership proposes that chances may rise as a result of the further knowledge provided by new stakeholders. Fourth, the affordable loss fosters entrepreneurs to ‘incorporate the possible downside’ in alternative assessments so that opportunity loss will not lead to personal decline. Finally, because of change and uncertainty in the environment, the entrepreneur should search for leverage contingency, leveraging for new alternatives from surprises, even the undesirable ones. Sarasvathy’s (2001) theory exposition presents a practical experiment about effectually engendered firms. Both, the effectuation theory and the expertise theory work for one objective, mainly to better understand the effect of experience on the way people think.

Means is one of the principles of effectuation which is divided also into three categories: Who I am, Whom I know and What I know. The latter, will be the focus of this study as it reveals skilled employees with specific type of expertise (Ericsson et al., 2006) examined at the individual level and between males and females in this study.

2.2 Innovation

Innovation can be defined as any new concept, product or practice that is perceived by an individual or group of people in organisations (Rogers, 1965). Another definition of innovation is presented by Mezias and Glynn (1993, p.78), “innovation is a non-routine, significant, and discontinuous organizational change”. They add that the market today is in a dynamic flux; new technology is constantly emerging, and the number of competitors is rapidly increasing. For their survival, companies need to incessantly generate innovative knowledge, deploying it throughout the company and embodying it in new products, services and technologies. Some researchers make a link between the quality of innovation in organisations and their learning or knowledge base (Cohen and Levinthal, 1990; Mezias and Glynn, 1993). Consequently, a proliferation of studies and books examine the learning organisation and its creativity (Senge, 1990; Watkins and Marsick, 1993; Dixon, 1994; Marquardt, 1996).

2.2.1 Creativity versus innovation

The two concepts, creativity and innovation are overlapping (King, 1995). Creativity is defined as introducing new perceptions and concepts, “doing something for the first time anywhere or creating new knowledge” [Woodman et al., (1993), p.293]. The literature reveals that some studies focus on creativity from psychological, managerial, educational, and economical level. This, while others examine the same concept from political science and sociological levels (Wehner, et al., 1991). The results of these studies led researchers to consider that these fields are employing a different set of words for a similar phenomenon: creativity and innovation (Amabile, 1996), where creativity is a prerequisite for innovation. Thus, according to some authors “the link between the two is not straightforward and linear” [King, (1995), p.87], and as far as the organisation is concerned, creativity is significant but not always sufficient (Damanpour, 1995).
2.2.2 Innovation and gender

“It should be borne in mind that innovation is not gender neutral” (Danilda and Thorslund, 2011). Although previous research investigations have pointed to the scientific link between being genius and gender, there is always a need for continued research and application to compare gender in social studies in general, and in innovation studies in particular. In her book, Myths of Gender, Sterling (1944) argues that boys get higher scores in Math because they are trained for such courses more than girls are, and she refuses the saying that boys are smarter than girls. She admits too in her book that scientists find that there is a clear difference between males’ and females’ brains, which in turn results in behavioural differences, as a result of hormonal variation. Does what apply to science apply to social studies too? Is there a link between gender and innovation performance in an organisation?

According to West and Zimmerman (1987), men and women ‘gender’ socially, or ‘do gender’ in every activity at work, and one cannot segregate their activities. They report that gender is not a trait, and doing gender is an interaction activity between males and females where new opportunities for change might appear. Furthermore, they point to the collaboration between genders in the innovation milieu.

3 Methodology

3.1 Theoretical approach

It is useful here to examine males’ and females’ responses in the organisation, and find out whether any of the genders is using the concept of effectuation more than the other within innovation.

First, in reviewing the business literature and general psychology studies, one can find a clear difference in gender related characteristics and attitudes. Some studies reveal that females are more interested in non-profit goals than men (Chaganti, 1986). Other studies show that females are less risk takers than men, and less confident as well (Bajtelsmit and Van Derhi, 1997). In other words, some researchers state that “one gender which is persistently found in both the general and business specific literature is a lower preference for risk amongst females” [Powell and Ansic, (1997), p.607]. Hence, this study draws on the effectuation theory (Sarasvathy, 2001) to introduce some testable propositions that link the development of genders’ expertise to firms’ innovation performance. As previously mentioned, ‘means’ is the first dimension in the concept of effectuation. It accentuates innovative outcomes by using this dimension. Sarasvathy (2001) refers to ‘means’ as an individual’s identity (Who I am), as an individual’s knowledge (What I know), and as one’s social network (Whom I know) which can be linked with collaborative knowledge. Read et al. (2009) point to effectual logic in the marketing area as a resource for the organisation (i.e., the ‘means’). The literature shows that a high number of studies on means (What I know) is positively related with venture performance. This motivated the authors to choose this dimension for the study and ignore the others (Who I am and Whom I know).
Second, it is evident that the adoption of innovation by organisations – identified as organisational innovation – has attracted numerous investigators in innovation research. Consequently, innovation performance in service organisations has been a primary focus among scholars for one simple reason: the number of employees in service industries is multiplying and thus the economy is changing now into a service economy (Gustafsson and Johnson, 2003). This might be a good reason to understand why more than one thousand studies on service innovation are posted by Osborne (1998). So, the purpose of this research is to explore some issues linked to the concept of service-innovation-performance (SIP). Individual innovative behaviour is examined by Scott and Bruce (1994) who put forth a new scale (SIP) used in this paper to measure innovation performance as well, through a comparison between genders. These SIP dimensions include searching out for new methods and techniques, generating creative ideas, promoting and championing ideas to others, investigating and securing funds needed to implement new ideas, developing plans for implementing the new ideas, being innovative, providing a suitable environment for developing new services, managing and collaborating together for developing new ideas, developing new services, innovating team service behaviour, marshalling adequate resources for new services, providing sufficient man-power for new services, building professional team for new services, developing effective services by team in respect to timing, resources, and process (Scott and Bruce, 1994; Matear et al., 2004; Hu et al., 2009).

In reviewing the literature, some researchers identify four theoretical approaches to the development of expertise: Individual differences, knowledge structure, experience, and deliberate practice (Sarasvathy and Read, 2005).

3.2 Research model

Effectuation is a multidimensional construct. Means is one dimension and it is studied through What I know which is the focus of this study, and it is related to domain-specific expertise (Ericsson et al., 2006), which analyses the relevant three dimensions; namely experience in the industry where the start up is operating; experience in the functional area where the individual is operating in the start up; and partner expertise (Lu and Beamish, 2006).

Our research interest is in answering to the question of what is the role of effectuation on innovation performance in firms? And subsequently, does the one who effectuates more performs better? And whether this innovation performance is gender related. A model for testing in this framework is suggested (Figure 1).

Figure 1  Suggested model
As a result of the above, two hypotheses are put forth.

**H1** Effectuation positively correlates to SIP in organisations.

**H2** Effectuation is gender related. Males effectuate more than females.

### 3.3 Data collection method

The study on effectuation’s impact on innovation performance and whether the relationship is gender sensitive or not, has a clear research question and hypotheses. As the population of media innovator companies in Lebanon is also clearly framed, the researchers attempted to identify a subgroup, namely the television program producing and broadcasting entities. This sub-group has a distinct set of characteristics that differentiate it from other forms of media.

The researchers decided to put forth a questionnaire and to collect the data following the example of Okpara (2004) in administering the quantitative surveys. The construct was formulated in three parts. The first part consists of four measure-items for effectuation. The second consists of 14 scale items on innovation performance. Both parts are borrowed from previously validated instruments. And the third on demographic variables including gender, age, educational level attained, length of work experience in the field in general, length of work experience in the current firm, type of work in the current firm, and length of work experience with current team leader. All the questions included are close-ended. The measure uses a seven-point Likert scale in both effectuation and innovation performance. The scale ranges from 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6 = agree and to 7 = strongly agree.

The study’s domain construct is highly well defined and the sample items clear (Zickmund, 2003). Before data collection, the researchers conducted a pilot test (Malhotra and Birks, 2006). For this purpose, a pilot questionnaire was prepared, first, using the English language. Second, a translation was provided by a sworn translator into Arabic. Third, a reverse translation was conducted from Arabic into English in order to control for the language and sentence meanings. Pretesting is important to establish that there is no ambiguity, and if any exist, modifications are then required. “If you are distributing a survey, pilot test, it first to ensure that the instructions, questions; and scale items are clear” [Pallant, (2007), p.5]. The pilot test was done with 30 respondents to ascertain that the measure items are explicit, relevant, and meaningful. The measure proved to have no major problems. The respondents needed ten minutes to complete the survey.

The data was collected by the researchers personally from the *Lebanese Broadcasting Corporation International* widely known as *LBCI*, the first private television station in Lebanon. LBCI was founded in 1992 and acquired the assets of Lebanese Broadcasting Company (LBC), an entity founded in 1985 during the Lebanese civil war. LBCI expanded globally in 1996 when it launched its satellite to cover the Arab World, USA and Australia. This company was chosen for conducting this study because it ranks number one in Lebanon, holding the highest viewership rates for a number of years including the year 2012 (Ipsos Lebanon, 2012). Also, it is considered as a leader in its ability to incorporate novel technology into its operations and creative ideas into programs, in a sector that employs a total population of 2,000 persons.
The process of collecting the data took place in January and February 2013. The population of the study consists of 16 teams. The protection team (61 people) are excluded from the study because they do not play a role in innovation in the company. The employees of the firm at the time of the survey were 204, divided into 16 teams, all of whom took part in the study as the human resources manager of the company distributed the questionnaire on all the employees (male/female) that work within teams in the organisation. “The larger the sample, the more accurate the estimate will tend to be” [Pallant, (2007), p.72]. The responses were then deposited by the respondents in a box put for this purpose, and collected by the researchers directly. The response rate was 100%. However, some of the responses were not usable. Thus, the final number of responses was 198, representing 97% of the surveyed sample. The respondents were 118 (59.596%) males and 80 (40.404%) females.

3.3.1 Factor analysis

To analyse all the data, SPSS 19.0 is used to assess the reliability and consistency of all items of the study. For purifying the measure, the researchers conducted a principal factor analysis (PCA) for every part of the measure, in order to identify those variables that explain the correlations’ patterns through a smaller set of coherent scale items (Pallant, 2007). The factorability of the collected data at hand, as tested using the sampling adequacy measure (KMO), results in an index varying between 0 and 1.0, considering 0.6 as acceptable (Tabachnick and Fidell, 2007). The results of the analysing the data reveal a KMO index of .603 for the independent variable measure items (Effectuation) and a KMO = .773 for the dependent variable (Service Innovation Performance), which are both considered acceptable. Moreover, a Bartlett’s test of Sphericity was run on the data. The results show a significance level of .000 for both independent and dependent variables. Finally, the Eigenvalues of the components were assessed. The results of all the item scales included in the questionnaire show that they do explain the variances with values above 1.0 except the last items (item 18) that shows an Eigenvalue of .803. Thus, all the item scales are considered acceptable, and we can reject the null hypothesis that postulates that the variables are not correlated, therefore say that the data collected is factorisable.

Commonalities reflect “how much of the variance in each item is explained. Low values (e.g., less than .3) could indicate that the item does not fit well with other items in its component” [Pallant, (2007), p.196]. Usually, variable items with commonalities above 0.500 are retained. The results of testing the measure’s components’ commonalities using the Extraction method of the PCA of SPSS 19.0 reveal extractions ranging between .522 and .748. Thus, we conclude that all the items of the scale contribute to the factors’ construction.

3.3.2 Reliability analysis and data reduction

To test for the reliability of the construct, Cronbach’s Alpha coefficient is assessed for both parts of the questionnaire (1 and 2). The purpose being the assurance that the item scales are aligned in measuring the underlying scale’s attributes (Pallant, 2007). The coefficient alpha ranges between a minimum of 0 and a maximum of 1.0, where “high test-retest correlations indicate a more reliable scale” [Pallant, (2007), p.6], with a widely accepted minimum of internal consistency at 0.7 (Nunnally, 1978). In measuring
effectuation, with its four-scale items, the result shows a Cronbach’s Alpha coefficient of .724, which is considered acceptable (Nunnally and Bernstein, 1994). SIP construct consists of 14 items on a seven Likert scale too, and is borrowed from Scott and Bruce (1994), Matear et al. (2004), and Hu et al. (2009). Cronbach’s Alpha coefficient is .700 which is acceptable too.

As for assessing the scale’s validity, the researchers reviewed the literature, put every effort to meet the requirements of content, construct and criterion validity. Moreover, the scale was previously tested in different environments with comparable results. Thus, we consider that the validity of the scale is established and move to highlighting the study’s results.

4 Research results

For a better insight into the characteristics of the respondents, a frequencies analysis was conducted. The results show 118 respondents are males (59.5%) versus 80 females (40.4%). The major highlights of the sampled respondents are summarised in Table 1.

Table 1  Major highlights of the sample of respondents

<table>
<thead>
<tr>
<th>Factor</th>
<th>Males’ major highlights (118)</th>
<th>Females’ major highlights (80)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Age</td>
<td>34</td>
<td>30–39 years</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>40–49 years</td>
</tr>
<tr>
<td>Educational level</td>
<td>43</td>
<td>High school</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>Bachelor’s</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>0–5 years</td>
</tr>
<tr>
<td>Total work experience</td>
<td>19</td>
<td>6–10 years</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>11–15 years</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>15+ years</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>0–5 years</td>
</tr>
<tr>
<td>Work experience in company</td>
<td>18</td>
<td>6–10 years</td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>11–15 years</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>15+ years</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>0–1 years</td>
</tr>
<tr>
<td>Work experience with current team leader</td>
<td>13</td>
<td>1–2 years</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>2–3 years</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>3–5 years</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>5+ years</td>
</tr>
</tbody>
</table>

Source: Authors’ own work

Analysing the correlations between the different variables under study, the researchers conducted the analysis on the complete data, and then by splitting the data by gender. The results show that when the data is used a s a complete set, the factor ‘effectuation’ is weakly positively correlated with age (r = .214) with a Sig. = .002 and with ‘the number of years working in the firm’ (r = .294; Sig. = .000) at the level of 99% (two-tailed).
Moreover, ‘effectuation’ is also weakly positively correlated with general work experience \((r = .210; \text{Sig.} = .003)\) and time spent working in the same team \((r = .149; \text{Sig.} = .036)\) at 95% confidence. Furthermore, the results show that ‘service innovation performance’ is positively correlated with the number of years spent working in the firm \((r = .189; \text{Sig.} = .009)\) at a confidence level of 99% (two-tailed). Finally, the results reveal a moderate positive correlation between ‘effectuation’ and ‘service innovation performance’ with \(r = .437, \text{Sig.} = .000\), at 99% confidence level (two-tailed).

A second correlation analysis is run on SPSS 19 with data split by gender, in order to test whether innovation is gendered or not. For both males and females, the results show a high positive correlation between age \((r_m = .647; r_f = .722; \text{both at Sig.} = .000; p < 0.01; \text{two-tailed})\) as well as total work experience with work experience in this firm \((r_m = .833; r_f = .836; \text{both at Sig.} = .000; p < 0.01; \text{two-tailed})\), which supports Hypothesis 1.

Table 2 Correlations between the different factors

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Males</th>
<th>Females</th>
<th>Total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work experience in this firm and age</td>
<td>.647 .000 0.01</td>
<td>.722 .000 0.01</td>
<td>.692 .000 0.01</td>
</tr>
<tr>
<td>Work experience in this firm and total work experience</td>
<td>.833 .000 0.01</td>
<td>.836 .000 0.01</td>
<td>.843 .000 0.01</td>
</tr>
<tr>
<td>Work experience with team leader and age</td>
<td>.460 .000 0.01</td>
<td>.572 .000 0.01</td>
<td>.528 .000 0.01</td>
</tr>
<tr>
<td>Work experience with team leader and total work experience</td>
<td>.627 .000 0.01</td>
<td>.704 .000 0.01</td>
<td>.684 .000 0.01</td>
</tr>
<tr>
<td>Work experience with team leader and work exp. with this firm</td>
<td>.607 .000 0.01</td>
<td>.699 .000 0.01</td>
<td>.664 .000 0.01</td>
</tr>
<tr>
<td>Work experience with team leader and educational level</td>
<td>−.259 .000 0.01</td>
<td>−.027 .000 0.01</td>
<td>−.203 .000 0.01</td>
</tr>
<tr>
<td>Work experience with team leader and SIP</td>
<td>−.014 .000 0.01</td>
<td>.292 .000 0.05</td>
<td>.120 .000 0.05</td>
</tr>
<tr>
<td>Type of work and SIP</td>
<td>−.210 .000 0.05</td>
<td>−.016 .000 0.05</td>
<td>−.128 .000 0.05</td>
</tr>
<tr>
<td>Effectuation and SIP</td>
<td>.401 .000 0.05</td>
<td>.506 .000 0.05</td>
<td>.437 .000 0.01</td>
</tr>
</tbody>
</table>

Source: Authors’ own work

The correlation results reveal that there are differences and that SIP and effectuation are slightly gendered, which does not support Hypothesis 2.

Testing for the regression analysis using SPSS 19, the regression was done using service innovation performance as a dependent variable and effectuation as independent, using the ‘enter’ method. The result of the regression analysis reveal that the variance in Effectuation explains 18.7% of the variance in service innovation performance \((r^2 = .187; \text{Sig.} = .000; p < .05)\); with a correlation coefficient explaining 43.7%. Thus, the formula for respondents’ service innovation performance (SIP) being 

\[
\text{SIP} = .346x + 2.494.
\]

Furthermore, the researchers ran a regression analysis after splitting the collected data by gender. The results show a slight difference between the genders. The regression
of SIP on effectuation shows that for males $r^2 = .161$, with a coefficient of correlation $R = .401$ and Sig. = .000 at 95% confidence. While for female respondents, $r^2 = .256$ and Sig. = .000; at 95% confidence, with a correlation coefficient (R) explaining 50.6%. The formula for the equation of SIP differs slightly between male and female respondents.

For males SIP = 2.591 + .326x, while for females SIP = 2.297 + .386x.

Moreover, additional investigation was run using SPSS. The researchers analysed for an ordinal regression. The results prove that there is no significant difference between males and females. This proves that both males and females are the same with respect to the dependent variable service innovation performance.

5 Discussion of results

5.1 Introduction

Today, little empirical research has been accomplished in this area of study; as noticed from the literature review, a clear focus on entrepreneurial managers involved in several effectual based projects. The objective of this study is to widen the scope of effectuation showing its relevance to entrepreneurs as well as to different genders. Based on historical and social context, assumptions are made that males and females differ in their behaviour. Thus, the ability to be creative is hindered by such typical ideas and stereotyped concepts about gender.

The perception that refers to social distinction between genders is changing with time. This can be noticed in a context that provides fairness of treatment between men and women, and creates a homogeneous context in terms of rights, duties and opportunities (Danilda and Thorslund, 2011).

As previously mentioned, the objective of this paper is to examine the effect of effectuation and its practice on male and female employees. Consequently, we will discuss the contribution of this study in two levels in the literature: contribution to effectuation literature, contribution to innovation literature. Finally, we will present some managerial implications, limitations of the work, and try to open a vignette to future research.

5.2 Contributions to effectuation and innovation performance literature

This paper contributes positively to the literature on effectuation by reinforcing some new evidence to the relationship between effectuation and innovation performance. First, there is a shift in this study from the field of entrepreneurial discipline where entrepreneurs are considered as co-creators of opportunities to another discipline of expertise, males and females, in a special context of innovation practice. Second, while Brettel et al. (2011) use in their study the effectual vs. causal process as independent variables, we differentiate between our independent variable and use ‘mean’ to obtain the effectual concept. Finally, we can conclude that this study is carried out on the expense of one effectual dimension only, thus, providing more detailed analysis to it.

The study results reveal, and contradictory to the general Middle-Eastern norms, a certain number of interesting results. First, the majority of the staff working at LBCI, that is 75 males (63.5%) and 29 females (40%) have been working in the company for more
than 10 years. This proves that with the influx of new television service companies to the
Lebanese market in the same period, including a number of Iraqi, Gulf and Syrian funded
companies, the company was capable of retaining a low turnover among its staff. Second,
82 males (69.5%) and 44 females (55.0%) employees have been working with the same
team leader for more than five years. This reflects a high level of stability as well as a
limitation on the career development planning level of employees. Furthermore, it either
shows that these team leaders are so good and irreplaceable, or that the employees have
accepted them as leader, thus, submissively acknowledging the leadership, or yet that
these leaders are so good on both levels of effectuation and innovation that they are
retaining their positions.

The results of this study reinforce a good support to what others point to; “innovation
milieus are important perspectives for understanding and necessary policy tools for
contributing to economic growth at regional and national level” (Danilda and Thorslund,
2011). Therefore, the media industry is invited to develop some factors or some milieu
that serve SIP on the individual level and on gender level, and to encourage further
innovation.

Although, in general, age is positively correlated with the number of years of work
experience, the statistical results of the study show that age is highly correlated with the
length of work experience in the same firm in general. There seems to be a slight
difference between male (rm = .647) and female (rf = .722) respondents, where females
tend to exhibit higher commitment and loyalty levels to their employer. This could be due
to the relaxed work environment in which innovation is permitted irrespective of gender
in general, as compared to other organisational settings within the same culture.
Moreover, the fact that total work experience is highly positively correlated with work
experience in the same firm shows a general acceptance of the firm as a long-term
employer of choice equally for both males and females (where rm = .833 compared to
rf = .836).

The results of the correlation analysis reveal slight gender differences in the impact of
effectuation on SIP. In a culture that is highly paternalistic, where male leadership in all
aspects of life is almost unequivocally pervasive, the fact that a single SME proves to
have shown effectual learning through innovation performance is by itself a fact to stop
at. The possible explanation is that the team within the firm is first, highly educated (as
observed through the sample descriptive analysis); second, the teams are well established,
with members reporting being with the same team leader for more than five years, thus
have reached a high relational maturity level. Third, the fact that in these creative units or
teams, the leadership might be more democratic than autocratic in nature. Finally, the fact
that the majority of the team members are in their mid-careers (50.8% of males and
33.8% of females are in their ‘40s), an age in which employees are described in
organisational behaviour as wise and goal oriented; thus having personal goals that might
be aligned with organisational ones, resulting in self-motivated employees, or what is
known as Theory Y.

Moreover, the results show that effectuation explains 16.1% of males’ and 25.6% of
females’ innovation performance. Not much difference between genders can be noticed.
Hence, these results reinforce some evidence in the literature which recommends that “In
order to be effective, the establishment of equality in organisations must be rooted in and
must mirror other organizational processes aimed at innovation” [Olgiati and Shapiro,
(2002), p.58]. This indicates a slight gender difference. Why do females show higher
variance? The reason lies in the cultural fact that males may be more shy in trying
innovative endeavours for risk of failure, whereas females have less at stake in presenting new ideas.

5.3 Limitations of the study

The study has a number of limitations that hinder the generalisation of its results. First, the sampled population is taken from one service innovating SME among a group, thus bearing the chance of not representing the total population. Second, as a leader in its sector, the company may not represent the sector that has a certain number of activities, norms and attitudes applied differently within the work environment. Third, the company being located in a social medium that is highly educated, and being known for its innovative creative programs, might attract employees with eccentric views. These special people are rather different from the general average citizen, thus affecting both effectuation and performance within this firm specifically.

5.4 Managerial implications

As for practical implications, the results of this paper show the importance of gender or the gendered side in the service industry. It is evident that to attain high SIP, service organisations need an open, democratic culture to encourage further innovation. When managers focus more on employees as individuals, whether a male or female, then all employees will be encouraged to be innovative in the same way. So, it is quite important that decision makers should take action to ensure that all their managerial teams treat their employees equally. Moreover, the success of this small and medium enterprise specifically in creating a work environment in contrast to its surrounding external environment is proof that innovation can be sustained at the human level through creativity and effectuation. Thus, it is recommended that managers allow for, support and prepare their human elements within respective teams for better innovation capabilities through effectuation, or learning. Moreover, as effectuation proved not to be gendered, it is the responsibility of both top management and the human resources department to put in place policies, rules and procedures that push toward gender equality in general, allowing for fair treatment, equal opportunity and motivation of both genders. This in turn, when applied, will lead to a chain reaction in small and medium enterprises that would follow suite, resulting in change in the external environment.

5.5 Recommendation for further research

Our findings and limitations in this paper suggest clear avenues for further studies. First, we believe that effectuation, not only leaves room for entrepreneurial practices, but can also open the door to reshape innovation through the lens of effectuation. Therefore, researchers are invited to investigate the factor of effectuation from different dimensions and not only through ‘means’. Second, there is a need to more thoroughly analyse the impact of effectuation on gendered managerial behaviour in innovative settings, in both small and medium enterprises and larger organisations. Third, we chose our sample from Lebanese Broadcasting Company International that stands as a pioneer in the media industry in Lebanon as previously mentioned. Although team members are considered as a significant sample for testing innovation performance in service industry (Smith et al., 2005) and for testing our model as well, however, we do believe that generalisation is
questionable. For instance, what applies to our company does not necessarily apply to other media companies in Lebanon. Fourth, the use of SIP could be explored with other firms. Therefore, this paper endeavour was to fill a gap in the literature regarding innovation and gender, but there are still a lot of questions that can be addressed in forthcoming papers under this interesting topic.

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