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The role of market innovation in generating sales from product innovation: Empirical evidence from Norwegian firms

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Abstract

Many studies have focused on product innovation and the sales performance of new products in the literature. Few have however explored market innovation and its possible relationship with sales generated from technological product innovation. This is at odds with early and seminal contributions to the study of innovation, Schumpeter in particular, who have argued that both market and product innovation are important to the evolution of firms, industries and economies, and that these two types of innovations may even be complementary to each other. The purpose of this paper is to help remedy this flaw in the literature by examining the role of market innovation in the sales performance of new product innovations. To do this we use regression analysis and the CIS 2010 survey from Norway which contains measures of market and product innovation (including their sales). Results show that market innovations implemented by firms in conjunction with a product innovation significantly increase the sales performance of new product introductions and constitute a source of new product sales in addition to R&D and marketing two classical indicators of technology-push and market pull. Results are robust to different econometric specifications.

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1. Introduction

Product innovation, defined as the market introduction of products that is either new to the firm and/or the firm's market, and their sales performance has for many years been central to the literature on innovation (Teece, 1986; Laursen, 2012). This focus is understandable since new products is a key mechanism in which firms can achieve new sales, improve their market share(s) and steal business from competitors. However, research has shown that attempts to introduce new products often fail, both in the technological search phase, and in the market introduction phase (Van de Ven et al, 1999; Cooper & Kleinschmidt, 2000). The technological and commercial uncertainty surrounding the introduction of new products onto the market is considerable, and may hinder companies from reaping sales from new product introductions, or even hinder them from trying to innovate at all.

Still, some companies manage to introduce new products successfully and reap high economic performance from doing so (Van de Vrande et al, 2003; Clausen, 2013). Understanding why some firms do this better than other firms holds the promise to gain insight into the much debated issue of why firms persistently differ in their performance (Nelson, 1991).

Studies have examined different factors and whether or not they promote product innovation and the sales performance of new products, such as marketing, external knowledge sourcing, research and development (R&D) and firm size (e.g. Laursen & Salter, 2006; Clausen et al, 2012; Czarnitski & Horwarth, 2012). However, most scholars have overlooked the role of non-technological innovation and its possible relationship with technological innovation, including new product sales performance. This is at odds with early and seminal contributions to innovation theorizing.

Joseph Schumpeter is arguably the most influential theorist about innovation and the role of innovation in economic development (Fagerberg, 2003). Interestingly, his conceptualization of innovation includes market innovation (Schumpeter, 1934). He argued for a broad understanding of innovation which distinguished between the following: "Product innovation" (new good or a new quality of a good), "process innovation" (new method of production), "input innovation" (new source of supply of raw material), "organizational

innovation” (new organization of industry) and “market innovation” (opening up of a new market) (Drejer, 2004).

Scholars have recently acknowledged the broad Schumpeterian conceptualization of innovation and are increasingly focusing on non-technological innovation in itself and its possible relationship with technological innovation (see for instance Sappasert & Clausen, 2012; Mol & Birkinshaw, 2009; Damanpour et al, 2009). What is surprising to note however, is that few prior studies have explored the relationship between market innovation and its relationship with product innovation in the innovation literature.

The purpose of this paper is to help remedy this flaw by examining the role of market innovation in the sales performance of new product innovations. We focus on sales performance as sales are a clear signal of market adoption and success. This is in line with a Schumpeterian understanding of product innovation which distinguishes clearly between new products that have an impact on economic and industry evolution and products without such an influence (Fagerberg, 2003). This paper extends prior theorizing on the role of demand and market research for innovation with the argument that firms can proactively shape and create new markets (for new products) through the implementation of market innovations in what others have described as a “driving–markets” (Jaworski et al, 2000) approach to technological innovation. We further argue that the implementation of a market innovation is a strategy to reduce the technological and commercial uncertainty surrounding the introduction of new products onto the market. If market innovation reduces such uncertainty, we argue that market innovation will have a positive influence on their sales performance, indicating a complementary relationship between market and product innovation. To examine this, the following research question is asked: To what extent does market innovations implemented by the firm increase the sales performance of new product introductions?

The main contribution from this paper is that we help advance the scholarly knowledge about the extent to which marketing innovations implemented by the firm increase the sales from new product introductions. Thus, this paper examines the possible complementary relationship between market and product innovation, an issue that has been little explored in the literature.

The paper is organized as follows. In the next section we will discuss theorizing on market innovation and their possible role in the sales performance of new products. Our discussion will culminate in 2 testable hypotheses concerning the relationship between market innovation and sales performance of new products. The method data and variables are discussed in section 3. Analysis of the data is conducted in section 4 while concluding remarks is offered in section 5.

2. Theory and hypotheses

Despite its acknowledged importance by Schumpeter, one of the founding fathers of Innovation Studies (IS), market innovation has received scarce attention in subsequent studies. When looking at the scholarly contributions to innovation studies (see Fagerberg et al, 2012; Fagerberg, 2005), this literature is dominated by studies focusing on technological innovation. The sole focus on technological innovation limits our understanding of how innovation, broadly defined in the Schumpeterian sense, influences industry renewal and the formation of new markets.

It is important to start correct this as seminal theorizing in the innovation studies literature suggests that both technological and non-technological innovations, and their interrelationships, are essential for the evolution of industries and economic development. For instance, Freeman (1995) has argued that non-technological and technological innovation is greatly interdependent, and Nelson (1991) has argued that their co-evolution is part and parcel of economic progress.

Although several scholars have recently called for more research on “non-technological innovation” (e.g. Lam, 2004; Sapprasert & Clausen, 2012; Mol & Birkinshaw, 2009; Damanpour et al, 2009), only a handful of studies have been devoted to non-technological innovation. Further, the focus in these studies have been on organizational innovation (e.g. Sapprasert & Clausen, 2012; Mol & Birkinshaw, 2009), while market innovation has received scarce attention. Thus, it is important to start focus on market innovation in the scholarly literature.

A challenge facing prospective studies on market innovation is that they cannot build upon sophisticated theoretical conceptualizations, nor empirical studies on this subject matter, to any great extent. Rather, prospective studies on market innovation need to be prepared to help develop knowledge and theorizing that subsequent studies can improve and refine. That said, literature streams devoted to the study of innovation touch upon the issue of market innovation, at least when one looks at the part of market innovation which relates to the issue of demand.

Arguably, a literature that can be related to market innovation is the literature on technology push and demand/market as sources of technological innovation (see Stefano et al, 2012 for an overview of this literature and debate). In general, a technology push approach is when a new innovation (with its origin in research and development) is pushed through production and subsequent marketing and introduced onto the market without consideration for whether or not the invention satisfies a user need. A demand pull approach takes in contrast an expressed user need as a point of departure for subsequent R&D, production and marketing.

Arguably, the role of demand pull for innovation was more-or-less initiated by Schmookler (1966). Schmookler challenged the conventional view at the time that technological innovations were supply-side driven, promoted for instance by advances in science and knowledge. In his empirical work, Schmookler demonstrated that demand-pull influences were also important for technological innovation. He further argued that the greater the demand the larger number of creative people would work to find solutions, innovations etc to satisfy the demand. Two central premises behind Schmooklers theorizing were that technological innovation within firms responds to opportunities for profit and that the larger a (potential) market is the more innovative activity will be directed to it, partly because the profitability of innovation will increase with market size (Scherer, 1982).

The debate on the relative roles of technology push and demand pull for innovation tilted in the favor of science and technology as the source of innovation in the 1970s (Stefano et al, 2012). For instance, Dosi et al (1982) argued at that time that research had produced insufficient evidence that needs of consumers and users expressed through market signals were the prime mover of technological innovation. The debate about the relative influence

of demand pull and technology push is further reflected in the literature that has discussed the linear mode of innovation. The linear mode of innovation as conceptualized in the literature postulates that technological innovations processes are initiated by basic science, followed by applied research, development, production, marketing and diffusion (see Balconi et al, 2010 for an overview over this literature).

Challenging the linear model, Kline & Rosenberg (1986) formulated an interactive model of innovation where both demand and science/technology were important drivers of innovation and where feedback loops existed between the different stages of the innovation process. The predominant view in the literature today is that science and technology is “the source” for overall majority of technological innovations but where demand is a good companion that drives innovation in the right economic direction (Balconi et al, 2012).

2.1 Hypothesis development

The discussion above has shown that prior research that touches upon the issue of market innovation has by and large reduced the market aspect of innovation to a question of demand (Mowery and Rosenberg 1979; Azimont et al, 2012). Further, another problem in this literature is that demand is conceptualized as exogenous to the firm, something that the firm cannot influence or shape. Even theorizing which is quite sympathetic to the argument that demand is important for (the success of) technological product innovation (e.g. Schmookler, 1966), portray firms as mostly passive actors that mainly react to expected size and profitability of demand.

Arguably, such a conceptualization of innovative firms is quite far from Schumpeter’s conceptualization of the innovative entrepreneur who challenge and break with existing market and social structures. His conceptualization of market innovation is one in which innovative firms actively, and not passively, shape and influence demand for new products. Some research within marketing seem to support this as it is argued and shown that there is considerable room for strategic action by micro-actors in the formation and development of markets (e.g. Araujo et al, 2008; Vargo & Lusch, 2011). Further, some has explicitly argued that firms can pursue a “driving markets strategy” where firms do not take structures in the

market, the preferences of consumers etc. for given (Jaworski et al., 2000). A driving-markets strategy share similarities with the concept of market innovation with its focus on not taking existing structures for granted, an issue which is central in Schumpeter's understanding of how entrepreneurs are able to promote the success of their innovation.

Drawing on Schumpeter's conceptualization of the innovative entrepreneur, we argue that firms introducing new products can boost their sales by also implementing market innovation. We focus on the role of market innovation for two different types of product innovations in this paper.

2.1.1 "New to the firm only" and "new to the market" product innovation

The literature argues that product innovation is a heterogeneous category of innovation (Damanpour and Wischnevsky, 2006). A taxonomy of product innovation that is increasingly adopted in the literature distinguishes between product innovations that are "new to the firm" and product innovations that are "new to the firms' market". These two types of product innovations differ in the sense that the first type represents the adoption and modification of an existing product, often generated by others (e.g. imitation), while the latter represents generation of unique new products (Damanpour and Wischnevsky, 2006). No prior study (that we are aware of) has examined the role of market innovation in boosting the sales from these two types of product innovations introduced by firms.

It may be argued that a firm can reap higher sales from the market introduction of "only new to the firm" products if they at the same time implement a market innovation. The joint introduction of such a product with the implementation of a market innovation is a strategy with low technological and commercial uncertainty, but with moderate-high opportunities for commercial success. The reason is that the product already exists, other may have developed and even tested it (i.e. low technological uncertainty). Further, the adopting firm is in the position that it can "wait-and see" if an existing product (but new) are able to penetrate the market. Thus, the adopting firm will have few incentives to adopt a product that the market does not want. Hence, there is also low commercial uncertainty surrounding the adoption of a new product generated by others. The "problem" however is that the adoption of existing products will have low opportunities for commercial success because competitors have already established themselves on the market. However,

bundeling an adopted product (that others may have generated) with a market innovation can re-cast the adopted product on the market, distinguishing it from competing products that offer the same technological solution. Further, through the implementation of a market innovation the firm may shape and influence the formation of an entirely new market for existing products that the focal firm or others have demonstrated the technological soundness of. Thus, we put forth the following hypothesis:

Hypothesis 1: Market innovation will increase the sales from market introduction of “only new to the firm” products

The generation of entirely new products for the market is a strategy characterized by high technological and commercial uncertainty but also with high opportunities for commercial success. The literature has demonstrated that many firms fail when attempting to develop new products. Further, that many new products that work technologically, even products that may be considered superior technologically, are not adopted by the market. However, we argue that the implementation of market innovations may reduce the commercial uncertainty for firms that introduce products that are “new to the market”. The reason is that firms can actively seek to influence demand for their novel products through market innovation. Product generating firms that at the same time implement market innovations can thus expect that their “new to the market products” are more likely to be bought compared to product generating companies that do not implement market innovations. Thus, we put forth the following hypothesis:

Hypothesis 2: Market innovation will increase the sales from market introduction of “new to the market” products

3. Method and data

To examine our research question and test our hypotheses we use the Norwegian Community Innovation Survey for 2010 (CIS 2010) which include information (and questions for their measurement) about different types of innovations, in particular market and product innovation, including the sales from the latter type of innovation. The CIS survey and the questionnaire have undergone rigorous testing and development and builds upon

decades of research on innovation (see Smith, 2005). A key outcome of these activities was the so-called OSLO Manual (OECD, 2005) which the CIS survey follows.

Further, the CIS survey is done in each of the member states in the European Union, including ascending states, in addition to Norway and Iceland, and implemented by the official Statistical Bureaus of these countries. The survey is usually directed to either the CEO or the R&D manager of the enterprise. The CIS 2010 was administered by Statistics Norway and directed to a representative sample of firms from the Norwegian enterprise population. The CIS 2010 survey in Norway was directed to firms with 5 or more employees. However, since firms with between 5-9 employees got a short version of the survey this paper focuses on firms with 10 or more employees as they got the full CIS survey. The CIS 2010 for Norway had a response rate of 96 %. After excluding firms with 10 employees, our database contains information about 4841 firms.

3.1 Dependent variables

Product innovation is defined in the CIS 2010 survey as: “the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems”. Further, the CIS survey contained an explanatory note which elaborates upon the definition as follows: “Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market”. It was also explicitly stated that “Product innovations could have been originally developed by your enterprise or by other enterprises”. After the definition of product innovation, respondents were asked two question that they could answer yes or not to. First the following: “During the three years from 2008 to 2010, did your enterprise introduce new or significantly improved goods/services? This question measures “new to the firm” product innovation. Second, respondents were asked the following: “Were any of your product innovations (goods or services) during the three years 2008 to 2010 new to your market? This is a measure of product innovation “new to the market”. Respondents were then asked to indicate the percentage of total firm sales at the end of 2010 from the introduction of product innovations “new to the firm only” and from product innovations “new to the market”. Since we have information about actual sales at the firm level in 2010 we have also

calculated the actual sales from “new to the firm only” and “new to the market” product innovations.

3.2 Key explanatory variable – market innovation

Market innovation is defined in the CIS survey as: “the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing”. Four yes/no questions were posed in the survey to measure it: Did your enterprise introduce: “Significant changes to the aesthetic design” and/or “packaging of a good or service” and/or “new media or techniques for product promotion” and/or “new methods for product placement or sales channels” and/or “new methods of pricing goods or services”. This paper uses a binary market innovation measure where the value 1 indicates a yes answer to at least one of the above questions, and an ordinal market innovation measure where the number of yes answers has been counted (0-4).

3.3 Control variables – controlling for competing explanations

As discussed in the introduction, prior studies have focused on explaining product innovation and their sales performance. It is thus important to take into account that other variables apart from market innovation may influence the sales performance of new products, and that these may even render a possible relationship between market innovation and new product sales performance insignificant. Thus we need to control for these variables when testing the relationship between market innovation and product innovation sales.

The literature discusses a core group of variables which are considered to be related to new product sales. A standard variable is *firm size*. There is a large literature on the Schumpeter hypothesis which argues that there is increasing returns to firm size in innovation because larger firms possess the necessary financial resources to finance innovation (Cohen, 1995; Hall, 2002). Thus, we control for firm size, measured as (log of) the number of employees.

We also control for research and development (R&D). R&D is widely acknowledged as a key input to technological innovation (Clausen et al, 2012). Further, R&D is a widely used proxy for firms’ technological resources (Nelson, 1991; Nelson & Winter, 1982) and believed to be a vital aspect of a technology-push approach to innovation. Respondents were asked to

indicate the amount of funds (measured in 1000 NOK) their firms invested on internal R&D in 2010. We use this information (in log form) to include *internal R&D* as a proxy for firms technological resources.

As already discussed, marketing figures as an important stage in the linear model of innovation and also in the interactive model of innovation by Kline & Rosenberg (1986). Further, positioning new products relative to expected demand and size of market is a key aspect of a demand-pull approach. Further, marketing is an important part of a “market-driven” approach where firms attempt to reap higher sales by adjusting themselves and their products to existing market structures and user preferences (Jaworski et al, 2000). Thus we will control for whether or not firms were involved in marketing activities (1 = yes). Design is a type of activity which is related to marketing. Further, prior research has found that expenditures on design is positively related to new product sales (Czarnitzki & Thorwarth, 2012). Thus we will also add design as a control variable where the value 1 indicates that the firm has been involved in such activities.

Lastly, we will control for industry differences among the firms in our sample. The reason is that prior research has demonstrated that industrial sectors vary greatly in terms of opportunities for innovation (see Malerba, 2005 for a review). Industrial sector dummies based on industry affiliation at the 2 digit NACE level are included in our regression to control for such industry heterogeneity (see Malerba, 2005).

Descriptive statistics is displayed in table 1.

Table 1 show that 25 % of the firms in our sample introduced a new or significantly improved product during the time period 2008-2010. 20 % introduced a “new to the market” product innovation. 2,9 % of total sales in 2010 among the firm in the whole sample stemmed from the introduction of product innovation “new to the firm only” whereas 5.2 % of total sales (in average) stemmed from product innovations “new to the market”. 21 % of the companies in our sample implemented a market innovation (at least one of the specified types).

Table 1. Descriptive statistics (N = 4841)

Variables	Mean	Std.dev	Min	Max
Product innovation (new or improved)	.25	.43	0	1
Product innovation new to the market	.20	.40	0	1
Per cent of sales from product innovation new to the firm only	2.93	11.28	0	100
Per cent of sales from product innovation new to the market	5.15	17.15	0	100
Sales from product innovation new to the firm only (log)	1.28	3.32	0	15
Sales from product innovation new to the market (log)	1.78	3.80	0	15.60
R&D exp. (log)	2.14	3.65	0	13.83
Firm size (log)	3.87	1.07	2.40	9.77
Marketing	.16	.37	0	1
Design	.16	.37	0	1
Market innovation (ordinal)	.39	.88	0	4
Market innovation (binary)	.21	.41	0	1

4. Analysis

4.1 Results

Tables 2 to 3 below present results from a series of OLS regression analyses where the relationship between market innovation and sales from products “new to the firm only” and products “new to the market” have been reported. All estimated regressions show that market innovation has a positive and significant influence on sales from products innovations “new to the firm only” and “new to the market”, across different specifications of the dependent variable.

The dependent variable in table 2, percent of total turnover from new products, is naturally constrained between 0 and 100. Results thus show that when firms implement a market innovation (the binary version), the % share of turnover stemming from the introduction of “new to the firm only” and “new to the market” products is estimated to increase by roughly 3 % (everything else the same). This may not seem a lot, but it represents a substantial effect in terms of the volume of sales from new products, as table 3 looks more closely into.

The dependent variable in table 3 is the actual volume of new sales generated by “new to the firm only” and “new to the market” products, although logarithmically transformed. Due

to the log nature of the dependent variable in this table, the implementation of marketing innovation informs us that the introduction of a market innovation (binary) increases the sales from products “new to the firm only” with roughly 94 %. In a similar fashion, the implementation of a marketing innovation increase the sales from product “new to the market” with roughly 109 % (everything else the same).

A 94-109 % increase may sound like an unduly high estimate. However, remember that the average proportion of total sales stemming from new products in 2010 in our sample is “only” 3-5 % in our sample. Thus, an increase of new product sales by 94-109 % through the implementation of market innovation is as such reasonable.

Results in table 2 and 3 further show that the firms technological resources, proxied by expenditures on internal R&D, as well as marketing and design, have a positive and significant influence on the sales performance of new product introductions (both new to the firm only and new to the market). The highly significant influence of the internal R&D variable on products sales supports theorizing on technology-push, and the highly significant influence of the marketing and design variables further illustrates that higher innovation sales can also be achieved through a “market driven approach”. Thus, although the implementation of a market innovation is one approach firms can pursue to increase such sales, there are other approaches as well, as reflected in the influence of internal R&D and marketing.

Table 3. Explaining percent of sales from products “new to the firm only using regression analysis (unstandardized coefficients).

	Percent of sales from product innovation new to the firm only		Percent of sales from product innovation new to the market	
Constant	1.983***	2.138***	6.470***	6.613***
R&D exp. (log)	.507***	.514***	1.248***	1.252***
Firm size (log)	-.377***	-.377***	-1.799***	-1.801***
Marketing	3.995***	4.033***	7.466***	7.360***
Design	1.574***	1.750***	2.542***	2.535***
Market innovation (ordinal)		1.083***		1.553***
Market innovation (binary)	2.789***		3.170***	
Industrial sector dummies	Included	Included	Included	Included
R2	13	13	20	20
N	4841	4841	4841	4841
Method	OLS		OLS	

** Sig at the 0.05 level *** sig at the 0.01 level

Table 3. Explaining sales from products “new to the firm only using regression analysis (unstandardized coefficients).

	Sales (log) from product innovation new to the firm only		Sales (log) from product innovation new to the market	
Constant	-.396**	-.348**	.022	.076
R&D exp. (log)	.149***	.151***	.317***	.319***
Firm size (log)	.215***	.215***	.069*	.069*
Marketing	1.977***	1.971***	3.118***	3.103***
Design	1.068***	1.102***	1.057***	1.084***
Market innovation (ordinal)		.403***		.489***
Market innovation (binary)	.936***		1.092***	
Industrial sector dummies	Included	Included	Included	Included
R2	26	26	46	46
N	4841	4841	4841	4841
Method	OLS		OLS	

** Sig at the 0.05 level *** sig at the 0.01 level

4.2 Discussion

The purpose of this paper has been to add to the scholarly quest for new knowledge on the relationship between non-technological and technological innovation. We have done this by examining the role of market innovation in the sales performance of new products. Extending prior theorizing on the role of demand for technological innovation we have argued that product innovating companies can reduce technological and commercial uncertainty by implementing market innovation jointly with the introduction products “new to the firm only” and “new to the market”.

The core of our argument is that firms need not only passively react to existing demand conditions and structures in the market such as in following strictly market-driven approaches. Rather, firms can attempt to proactively influence the market, change customer preferences, even create new markets etc through the implementation of a market innovation., i.e. in essence pursuing what others have described as a driving markets approach (Jaworski et al, 2000). Thus, market innovation may be complementary to product innovation, including the sales from such innovations, an idea which is central in Schumpeter’s seminal theorizing, but which has been more or less overlooked by subsequent studies.

We therefore asked the following research question: To what extent does market innovations implemented by the firm increase the sales performance of new product introductions? Results reported in tables 2-3 above show that the implementation of a market innovation has a significant and positive influence on the sales from product innovations “new to the firm”. This results offer empirical support to hypothesis 1 which stated that:” Market innovation will increase the sales from market introduction of “new to the firm only” products”. Thus, we have empirical support for our argument that market innovation is a way to reduce technological and commercial uncertainty and enhance the scope for commercial success when introducing new but adopted products.

Results further show that the implementation of a market innovation jointly with the introduction of a product “new to the market” has a positive and statistical influence on the sales performance of the product innovation, a result supporting hypothesis 2 which stated

that: "Market innovation will increase the sales from market introduction of "new to the market" products". Thus, we also have empirical support from our argument that market innovation is a strategy to reduce market uncertainty for companies that generate and introduce entirely new products onto the market.

It should be noted that both hypotheses had to pass quite tough empirical tests as market innovation had to explain a significant proportion of the variance in new product sales, *in addition* to traditional indicators of technology-push (e.g. R&D) and market pull (e.g. design/marketing) to be confirmed.

The acceptance of the stated hypotheses helps confirm, as already argued by Schumpeter, that innovation is a broad concept which encompasses both technological and non-technological aspects and their complementarities. Indeed, the finding that market innovation is vital in new product sales performance is a reflection of this. It shows that not only can firms reap economic rents from innovation in the technological domain, but also from innovation in the market domain, creating new markets where none previously existed. This breaks with the traditional view of the role of demand in technological innovation which mainly argues that firms react passively to (expected) size of demand (Azimont et al, 2012). Drawing on previous theorizing we have argued that firms can proactively influence the demand conditions for their new products (Jaworski et al, 2000), as will be reflected in a positive relationship between market innovation and the sales performance of new products. Further, our argument and finding breaks with much of the core literature on innovation models which has a fairly "static" conceptualization of marketing where firms mainly react and adjust themselves and their products to existing market structures and customer preferences (see Stefano et al, 2012 for a review). Market innovation goes beyond such a static view and instead focuses – in line with Schumpeter's seminal theorizing – on markets that can be destroyed, changed and reshaped.

Thus, our results show that firms that do not take existing markets, including the structures within them, nor the preferences of customers as given, but rather attempt to destroy and change them, in conjunction with the introduction of new products, reaps considerable economic rents. Our argument and empirical findings would arguably have been no surprise

to Schumpeter (1934) who himself strongly argued that the innovative entrepreneur need to overcome both social and market structures to be successful. However, our argument and findings extend upon far more recent studies and theorizing which have started to bring “non-technological innovation” back in into the analysis of the role of innovation in the evolution of firms and markets. In particular, our findings provide an empirical basis for the argument that markets in not static but something which firms can influence and shape, with considerable effects for their economic performance.

5. Conclusion

There scholarly literature on innovation calls, at an increasing rate, for more research on non-technological innovation, including its relationship with technological innovation (Sapprasert & Clausen, 2012; Mol & Birkinshaw, 2009; Damanpour et al, 2009). It is argued that our understanding of the evolution of firms, industries and entire economies will always be incomplete if the scholarly community continues to focus solely on technological aspects of innovation. Neglecting how organizational or the market aspects of innovation co-evolve with and influence technological innovation will give a biased and incomplete understanding of the role of innovation in firm and industry evolution (Nelson, 1995; Damanour et al, 2005; Lam, 2005). Most of the research that has focused on non-technological innovation has studied organizational innovation, either alone, or its relationship with the economic performance of firms (Sapprasert & Clausen, 2012; Mol & Birkinshaw, 2009). There has been scarce research on market innovation in the literature on non-technological innovation.

Motivated by the gap in our scholarly knowledge, this paper has focused on the role of market innovation in the sales performance of new product introductions. The following research question was asked: To what extent does market innovations implemented by the firm increase the sales performance of new product introductions?

Our research question was elaborated into two testable hypotheses. In the paper we have argued that firms can reduce the technological and commercial uncertainty surrounding the introduction of new products on the market if they jointly implement a market innovation. If so, market innovation is complementary to product innovation, which will be reflected in

higher sales from new product innovation with the joint implementation of a market innovation.

Drawing on the Community Innovation survey (CIS) for 2010 for Norway, and regression analysis, we tested two hypotheses concerning the relationship between market innovation and product innovation. Hypothesis 1 stated that “market innovation will increase the sales from market introduction of “new to the firm” products” and hypothesis 2 stated that “market innovation will increase the sales from market introduction of “new to the market” products”. Both hypotheses received empirical support.

Our argument and hypothesis development draws on recent theorizing in the market literature which suggests that firms should not only be market driven and passively respond to existing market structures and customer preferences but also attempt to change, influence and create new markets actively (Jaworski et al, 2000). Arguably, this reasoning is not new however, but has been overlooked for many decades. Schumpeter, one of the most influential theorist’s about innovation (Fagerberg 2003), offered a conceptualization of innovation which included market innovation. Further, he argued that the innovative entrepreneur often needed to challenge and overcomes existing market and social structures to be successful. The confirmation of our stated hypothesis offers considerable empirical support to such theorizing.

Most papers have limitations and shortcomings – and our paper is no exception. One main shortcoming is that our analysis is cross-sectional. Hence, we can only study associations between our variables and not “causation”. Conducting a longitudinal analysis where market innovation clearly predates product innovation represents a nice avenue for further research. Such research would greatly add to the emerging literature on the relationship between non-technological and technological innovation.

Another shortcoming is that our analysis is constrained to a particular country, Norway. As such, our results have external validity in the strict sense only in the Norwegian context and in the time period 2008-2010. However, we believe that the key theoretical idea of the paper, namely that market innovation is complementary to product innovation, including

the sales from such innovations, can be applicable to also firms in other country contexts. However, this remains to be empirically tested, representing another opportunity for subsequent research studies.

A methodological shortcoming is that we have not examined how the firms in our analysis have been able to implement a market innovation and to what extent market innovation related to other marketing activities, like design and market research. Further, there is always the danger that omitted variables can have an influence on both market innovation and product innovation sales. Omitted variable bias can almost never be ruled out in regression analysis for sure.

6. References

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