Strategic and institutional approaches to product innovation: peripheral product innovation and the challenge of organisational legitimacy

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Abstract

Adopting an institutional perspective, this research examines the mechanisms through which marginal actors gain acceptance for product innovations in established organisations. We find that the strategic matching emphasised in most NPD research is complemented by efforts to align the innovation with the normative evaluations of what is "the right thing to do" and cognitive assumptions of what is "taken for granted" within the organisational environment. Three legitimating mechanisms are found to be used simultaneously during product development: lobbying to gain pragmatic legitimacy, internal relational building to gain cognitive legitimacy, and external relational building and obtaining feedback to gain moral legitimacy.

Keywords: product innovation, institutional theory, legitimacy
Topics: innovation, product and service development

Introduction

How do innovators gain acceptance for their new product idea within established organisations? How do they engage with the internal stakeholder groups to ensure that resources are allocated and support is lent to develop their new idea into a fully-fledged product? By and large, new product development (NPD) research adopts a strategic, rational perspective in arguing that product innovations should be seen as desirable and appropriate in organisations if they align with the firm's strategy (Kahn et al., 2012). In contrast, organisational studies on NPD find that in practice, decision making during product innovation is a highly political process shaped by the inter-firm distribution of power (Weissenberger-Eibl and Teufel, 2011), involving negotiation among different corporate interest groups (Martinsuo, 2013), where the outcome depends on the ability of the project manager to lobby effectively for support and resources (Rauniar et al., 2008), and innovator actors employing a range of mechanisms to legitimise their product selection decisions while bypassing the accepted rational decision making approaches (Gutierrez and Magnusson, 2014). The mechanisms through which actors legitimise product innovation in established organisations have been the focus of institutional research on product innovation which emphasises the institutional bases of organisational actions. Institutional research argues that product innovation legitimacy in established organisations is also rooted in cognitive or normative alignment (Vermeulen et al., 2007; Tripsas and Gavetti, 2000).

Anecdotal evidence also supports the argument that in practice innovation projects are often pursued not out of rational calculation of strategic alignment, but because they conform with the "taken for granted" corporate wide assumptions or with the organisational models and criteria for what is the "the right thing to do". For example Tripsas and Gavetti (2000) discuss the role of cognition in explaining why Polaroid abandoned the digital camera project, but continued with Helios, the medical digital imaging product. Helios was legitimate as it conformed to the top management's embedded beliefs and established views of the world for a razor/blade business model. Ray and Ray's (2011) analysis of the development of Nano reveals that Tata justified the project by underlying normative alignment with the "right things to do". Tata launched the product by arguing that Nano would be saving lives by providing a safer mean of transport compared with the scooter (Ray and Ray, 2011, pg. 221). Despite evidence that product innovation decisions of what is legitimate often bypass strategic alignment based explanations (Weissenberger-Eibl and Teufel, 2011), there has been little interest in examining product innovation from an institutional perspective.

We focus on a particular type of product innovation where the challenges of legitimacy are exacerbated: product innovation in peripheral units which occupy marginal position in the organisational hierarchy. Lacking legitimacy, such peripheral units, and the innovations they initiate, are often starved of adequate support and resources. Our research questions are: (*RQ1) What are the forms of legitimacy that peripheral innovator actors seek?* and *(RQ2) What are the mechanisms through which legitimacy is achieved in product innovation in peripheral units?*

Literature review: institutional theory, legitimacy and product innovation

Institutional theory conceptualises organisational behaviour as the product of ideas, values and beliefs that originate in the institutional environment in which organisations are embedded. In order to survive, organisations need to conform to what is regarded as desirable and appropriate in their environment, rather than to rational calculations of economic pressures for efficiency and organizational performance (Meyer and Rowan, 1977). Legitimacy processes through which organisations conform to what is seen as "*desirable, proper, or appropriate*" (Schuman, 1995; pg. 574) are thus given special standing in institutional theory. In the context of product innovation, the legitimization of a new product idea early on during the front end of the process is critical in allowing an emergent idea to be developed, concretized and ultimately accepted into the formal NPD process (Floren and Frishammar, 2012), improving the chances of success of the innovation (Dougherty and Heller, 1994).

There are three categories of legitimacy depending on the underlying behavioural dynamics. Pragmatic legitimacy involves the self-interested calculations of organisation's stakeholders and conforms to the strategic, rational tradition. Moral legitimacy involves the stakeholders' evaluation of the organisation and its activities, and cognitive legitimacy is based on cognitive consistency when stakeholders adopt a common frame of reference accept the organisation as part of the taken for granted. Moral and cognitive legitimacy are thus based on the notions of cultural and normative embeddedness that characterise the institutional perspective (Schuman, 1995; Scott, 1995). Faced with legitimacy crises, organisations can choose between three strategies: conforming, selection and manipulation (Schuman, 1995; see also Oliver, 1991). Conforming involves adapting organisational structures and procedures to fit a pre-existing institutional regime, thus signalling allegiance to the cultural order (Meyer and Rowan, 1977). Such isomorphic adaptation is often seen as the default legitimation strategy (DiMaggio and Powel, 1983). Alternatively, in fragmented contexts

organisations can select an environment that will give them legitimacy. More rarely, when the innovation departs significantly from existing norms, the innovating actors can actively develop new explanations of social reality to transform the environment to match their needs (Schuman, 1995).

By and large, NPD research follows the rational approach in emphasising legitimacy based on strategic alignment. For example, it is widely prescribed that idea generation (Amiable, 1994), new product innovation opportunities (Floren and Frishammar, 2012; Shum and Lin, 2007), resource allocation criteria (Cooper et al., 2004), and more generally decisions in product innovation teams (Ulrich and Eppinger, 2012) should be aligned with the firm's strategy. Legitimacy arises when a product innovation improves firm performance (Brown and Eisenhardt, 1995). The assumption underlying this approach is that firms' behaviour is driven by efficiency and performance calculations.

In contrast, institutional research argues that product innovation is illegitimate as it does not conform to existing organisational templates and the more radical the innovation, the less legitimate it becomes (Doherty and Heller, 1994). This research examines the strategies that innovator actors employ to legitimate their product innovation. In addition to conforming to the usual practices, other strategic responses identified include ceremonially legitimising and reframing new activities (Dougherty and Heller, 1994), reframing innovation projects as breakthrough innovations (Vermeuleun et al., 2007), selection of corporate sponsors, transformation of context to accept the innovation, and tolerance seeking to appeal to the benign neglect (van Dijk et al., 2011). Different strategies are successful depending on particular configurations of micro-institutional forces within the firm: a heterogeneous context encourages selection, multiplicity of interests, norms and beliefs supports tolerance seeking, while ambiguity in interests encourages transforming strategies. Otherwise, institutional forces will lead to conformity strategies (van Dijk et al., 2011).

These organisational contextual configurations however ignore the position of the actor within the organisation. Yet, the position of the actor within its context matters. While peripheral actors are less embedded and less committed to the prevailing norms and behaviours (Leblebici et al., 1991) and thus less conditioned by and more willing to depart from them, they lack the power and political tools (Kellogg, 2011) and the necessary authority and resources (Tushman and Romanelli, 1985) required to initiate dramatic change. In contrast, actors higher up in the organisational hierarchy are more likely to instigate change that diverges from existing institutionalised templates (Battilana, 2011). Thus the ability of actors to deploy different legitimacy strategies might vary depending on the position of the actors. For example, Daudgeos (2013) finds that marginal individual actors circumvent their peripheral position through deploying unobtrusive influence tactics. It would therefore be expected that in seeking to legitimise the product innovation, peripheral actors would be more likely to engage in unobtrusive tactics to avoid confronting more powerful actors, either through conforming or selection.

Research Design

The research follows an exploratory design and involves an in-depth, qualitative case study of a complementary product innovation in a marginal business unit of a large high-tech company. Research took place in two stages over six years. The first stage involved sixteen semi-structured interviews conducted in 2007 and 2008 with the unit management and members of NPD team. These interviews explored the unit's approach to product innovation. The coding list included broad categories such as organizational context (e.g. firm strategy, market conditions), and NPD approach (e.g. NPD

organization, structure, process). This analysis served to clarify the context in which product innovation took place in the unit. The second stage took place in 2013 shortly after product launch and involved ten semi-structured interviews with members of the senior management and product team. These interviews focused on the development process of the product, and were coded using Van der Ven et al. (2000) categories for exploring innovation processes: ideas, people, transactions, context, and outcomes. This data served to identify changes in the context and product development approach following the product innovation, and to explore the product development process.

Following coding, write-ups were built to triangulate all data for each of the different codes categories. The write-ups were then refined gradually and were used to identify and develop concepts and rough theoretical explanations for contextual characteristics prior to product innovation (crises of legitimacy), contextual characteristics post product innovation (legitimacy outcomes) and organisational actions during the development of the product innovation (mechanisms for gaining legitimacy). In parallel with writing-up, matrices were used to refine concepts and theoretical relationships (Miles and Huberman, 1994). For example, organising organisational actions across contextual characteristics post-innovation helped to clarify the association between legitimacy mechanisms and legitimacy types. Data analysis progressed gradually through iterations between coding, looking for patterns in the data, and revisiting the literature. Prior research also helped in refining the theoretical logic of emerging concepts, for example in matching the different mechanisms with the three types of legitimacy strategies.

Case study

The study examines the development of a family of complementary products (AccPrd) based on a new technology (AccTech) within a marginal business unit (Access Unit) of a corporation. The company's main business (Device Unit) targets a highly competitive segment of the consumer technology industry, where the market is split between a few competitors. Differentiation based on the product alone is increasingly difficult, with competition differentiating their offerings based on an ecosystem of complementary products and services. The Access Unit develops complementary products (accessories) to the company's main product (device), such as cables and connectors.

The innovator actor - pre innovation

Access Unit developed two categories of accessories: "*inbox products*" to add value to differentiate the device products in the device market, and "*outbox products*" to compete as standalone products in the accessories market. There is a fundamental difference between accessory and device products: accessory products are less complex, significantly cheaper and with shorter life cycle times. This difference had two implications. First, being significantly cheaper than devices meant that the financial contribution from outbox products to the firm's total revenues was small, although they were profitable in their own market. In addition, the inbox products were wiley perceived as standard, "*commodity products*, *where the value added to the [company's] overall business was quite limited*". Thus the unit was perceived as "*insignificant in terms of final contribution*" to the company performance, both directly through the revenues from outbox products, and indirectly though the enhancing the devices. Second, more, cheaper and shorter life-time products meant that the NPD approach in the Access Unit was very different from the typical process followed in the Device Unit. Although the processes shared a common frame, Access Unit was allowed to adapt the process, for example by employing less complex criteria for product evaluation, and by having smaller and less diversified NPD teams. There were also wider cultural and

structural differences between the units, with the Access Unit relying more on outsourcing, and being smaller and less bureaucratic. Originally part of Device Unit, the misalignment between processes, structures and cultures led to the separation of Access Unit as an independent unit in 2008.

In a market perceived to reward innovation, the Access Unit was perceived to do essential but "*boring*", "*very standard*", "*with no particular innovation*" and "*uninspirational commodity products*", which did not meet the criteria for "the right kind" of products that the market demanded. The unit thus confronted legitimacy crises on the pragmatic and moral front and was also experiencing cognitive misalignment.

The innovation: new product development

AccPrd is based on existing technology (AccTech), which while widely used in other unrelated consumer products has not been yet introduced on a wide scale in this industry before. AccTech was incorporated in three distinct accessory products: a "basic" product, and two co-branded products. All products were launched together with a new device generation. AccPrd marked a change in the NPD approach within the Access Unit to emphasise a stronger alignment with the Device Unit. This alignment was sought on all three levels. At pragmatic level, the unit was "*keen to support the [company's] value proposition*" by focusing on inbox products that enhance the differentiation of the company offering in the top-end market targeted by the Device Unit. At cognitive level, the unit was refocusing its mission to support the Device Unit, and was reframing its products as an integral part of the overall device value proposition: "*our wish was to do it together as a one company. Make kind of an experience that it is not a separate accessory, separate [device], but it's one story, one experience*". At moral level, the unit was refocusing on "the right kind" of products, i.e. innovative, for example by driving to be first to the market: "*we wanted to be the first, because that's the only only way to kind of show that we did it*", and with strong social cache. The development of the AccPrd was thus part of a wider legitimacy seeking effort within the unit. Three kinds of legitimisation mechanisms were purposefully used by the unit: lobbying, internal and external relational building, and gathering feedback.

<u>Lobbying</u>

During the entire AccPrd development, the product development and management team were engaged in extensive lobbying to persuade corporate stakeholders of the value of AccPrd. Lobbying included technical and product presentations, and regular communications. Presentations were targeted at different levels within the Device Unit, and at the firm executive management, and served two purposes. First, they allowed the Access Unit to construct and disseminate an aspirational story about the product early on in the development stage. The story focused on the strategic value of the AccPrd in supporting differentiation in the device market. Such product advertising activities were seen as a key component of the role of the AccPrd product manager: "*the most important thing [of] all this kind of 'creating the assets' [activity] was to sell the idea inside the company. So there were several stakeholders inside the company that we needed to convince that actually this is something that we must do, and this is something that we are able to ... kind of a bring something new to the markets. […]So [the technology manager] was able to make these excellent demos of the [the technology]. And basically what I [product manager] did, I get the samples and I went basically all around the company, kind of showing it, doing the demos: 'hey: this is what we do, isn't it great? This is superior'.*" Second, product presentations were used as a strategic communication tool to highlight and sometime exaggerate some of the

AccPrd benefits to accommodate the interests of internal audiences. In doing so the unit was incurring a trade-off between seeking to persuade the audiences that AccPrd development is in the firm strategic interest, and the fact that some of the product characteristics failed to match the company's expected values and norms. For example, product presentations emphasised the value added, and consumer related attributes of the AccPrd such as ease of use, which would contribute to the differentiation story, while downplaying the attributes that contravened the moral values within the organisation for products that are environmentally sustainable.

Lobbying also took less formal forms such as regular communication between Access Unit and the Device Unit to reinforce the product advertising and strategic communication persuading efforts. Regular communication took place at different levels: between product managers, project managers and among business owners, and served to emphasise the strategic importance of the product.

Lobbying was essential in persuading internal stakeholders that AccPrd development served a strategic need for overall product differentiation. As audiences were persuaded and AccPrd gained legitimacy within the company, internal stakeholders were more willing to provide resources and lend their support, thus gradually increasing the likelihood that AccPrd will reach the market. As explained by one respondent: "*there have been several instances during the development when the risk to drop it has been quite high. It was almost there, so I think we almost killed it several times. And I think one of the factors has been that at the moment that it was almost killed there have been already enough people in [the company] in different parts of the organisation starting to believing in it, there were people in Sales that started to believe in it, there were the development team […] the [main technology office] […] but most importantly actually, it got the buy in then from the marketing and the strategy. And I am not even talking executive now, I am talking, you know, product managers, marketing product management, marketing and so forth and programme managers on the [device] side.*"

Relational building

Internally, the complementary nature of the AccPrd required close collaboration with the Device Unit development team. In the past, the Device teams have often been less willing to accommodate Access Unit's requirements. In contrast, AccPrd development was characterised by close collaboration. This collaboration was proactively driven by the Access Unit management which saw the cooperation among product development teams as a way to re-align the unit and their products with the expectations of the company at large. This collaboration efforts was part of a wider effort to reposition the Access Unit as an integral part of the company: "*we said collaboration is the thing we wanna do, […] the way to achieve marketing visibility is to make great products and to collaborate with marketing and the way to sell it is to collaborate with the Sales force, understand how they will sell our products, and the way to make great products is to collaborate with the product teams to add more value to the to the ... total product offer. So that was, I think kind of a mental shift that was, that was an important one*".

Externally, two of the AccPrd were co-developed and co-branded with external partners. This set up was unusual, and required significant negotiations with the rest of the company. In its device market, the company had a widely recognised brand, while in the accessories market it lacked wide customer recognition. Collaboration with brand partners was driven by the need to create products that conform to the expected standards within the device target market: i.e. products with strong, credible consumer brands at the top end of the device markets, with strong social cache and an image of innovators. External relational building was also targeted at aligning the products

developed within the Access Unit with the open standard strategy model pursued within the company, and with the industry prevailing product model based on an ecosystem of interlinked complementary products and services. As explained by the AccPrd owner: "*there are different reasons for why we selected different companies. But [brand2] of course taking the technology feel a little bit away, giving a little bit more life style element to it that gives a nice extra, [brand1], the best [product] brand, making the product for us is showing that the ecosystem is there, you can start doing more, we have seen after that more [other products use AccTech] as well, and then this [other company] showing that it is not only [our company product] you can use.*"

However, in seeking to conform to the expected standards for product innovation, the unit departed quite significantly from the real practices and behaviours associated with the typical product development in the company which involved developing products that are company branded and engaging in collaboration only for technology rather than for brand purposes. External relationship building thus involved a trade-off between alignment to the model of "the right kind" of product, and alignment to the taken for granted norms and procedures for product development within the company.

In conclusion, internal relational building during product innovation was targeted at aligning the unit closer with the company in terms of the product development processes in an effort to be seen as an integral part of the company. External relational building was used as a mechanism to seek alignment with the normative evaluations of what a product should be both within the company (i.e. strong brand and based on open standard) and at industry level (relying on an ecosystem of complementary products).

Gathering feedback

Extensive product testing and technical prototyping during product development allowed the development team to gather feedback for further improvements, while also serving to identify and pursue corporate sponsors which would see the product as legitimate. Two types of audiences were sought: engineers as "professional colleagues", and decision markers as "business stakeholders".

Professional feedback was sought early during development to gain acceptance by the professional community that the product idea conforms to professional standards for product innovation and performance. Professional feedback relied exclusively on personal testing. Business feedback was sought throughout product development from actors with decision power in marketing, sales, other business owners within the Access Unit, and representatives of other business units who developed complementary products. Business feedback was based on personal testing and customer testing. Personal testing allowed the Access Unit to identify corporate sponsors, and to demonstrate that the product conforms to the criteria expected from these sponsors, such as ease of advertising for the marketing community, and ease of use for the business owners of related products. As explained by one of respondents: "*we were pushing very hard for all different business areas […] that you need to have this […]. And I think the greatest impact for them was really when we did the demonstration, so really let them see the functioning prototypes for the existing products, so that kind of gave them the courage so, yeah, now they really understand.*" Customer feedback was sought during the latter stages of development and served to reinforce the positive evaluation of the product by the internal business community. External customer testing also became critical in legitimising the product internally to seek support for further development.

Although occasionally overlapping, information gathering activities differ from lobbying activities. The scope of gathering feedback was to engage in debates with internal audiences to identify the groups that see AccPrd as legitimate, rather than

aiming to change their views apart from their immediate reaction to the product. Instead, lobbying activities served to proactively change stakeholders' views by convincing them of the strategic value of the product.

The innovating actor - post innovation

AccPrd was seen as providing significant value to the customer, this enabling the company to differentiate its offering in the device market. Financially, the product registered exceptional sales for the unit, while also enhancing device sales. Respondents mentioned exceptional attach rates, the need for volumes to be rapidly scaled up, and reports that customers were demanding devices are compatible with AccPrd. As such, the product was seen as strategically important in helping to position the company in the top end of the market as a credible innovator, which improved the position of the unit within the company: "*people are interested of us and they see that we are super important and bring value for the consumer so it's not just the [device]. So everybody inside the company basically understand it's [a device] and then it's accessories. […]It is not just a [device] anymore. It's a [main product] and a then there's a variety of accessories enhancing the experience.*" Normative evaluations have also changed, with the unit being perceived as developing "*cool*" products, with high visibility both within the company and within the market space, and with employees "*proud*" and "*valued, respected inside the company*". The prominence of the product on the company's website and in the promotion materials, and positive reports in the specialist media also indicate that AccPrd is widely perceived as an innovative product, adding significant value to the company's reputation and image in the market. AccPrd success also allowed the unit to align closer with the corporate values, interests and expectations. The perceptions on the cognitive consistency of the unit have changed significantly after AccPrd, with the unit now seeing itself as an "*integral to the whole company*".

Findings

By and large, NPD research emphasises the need for strategic alignment between product innovation activities and the firm's strategy (Kahn et al., 2012; Shum and Lin, 2007). We find that such pragmatic legitimacy is important in allowing the marginal actor to access resources and support during product development, but not sufficient. At least for marginal innovating actors, moral and cognitive alignments emerge as important strategies to gain corporate acceptance for the innovation, thus increasing the likelihood that the innovation will reach the market (RQ1). Moreover, we find that marginal actors can purposefully use product innovation to address their own legitimacy challenges. We find that legitimacy is gained through employing simultaneously three mechanisms which are associated with legitimacy building strategies: lobbying is part of strategic manipulation and is targeted at pragmatic legitimacy, gathering feedback is part of selection and targeted at moral legitimacy, while relational building is part of conformity and targets both cognitive and moral legitimacy (RQ2).

We also find that seeking legitimacy involves trade-offs. Two such trade-offs are identified: between moral and cognitive legitimacy in employing external relational building, and between pragmatic and moral legitimacy during lobbying. A preference is observed in our case for pragmatic versus moral, and for moral versus cognitive legitimacy. This indicates that although other forms of legitimacy are sought, pragmatic legitimacy through strategic alignment remains the most valued form of legitimacy by our innovator actor to gain corporate support for the innovation. This finding corroborates existing recommendations that during early stages of development, strategic alignment activities should take priority over legitimation efforts (Floren and

Fishammar, 2012). Nevertheless, our findings suggest that legitimating efforts are sustained during the entire duration of products development at least for complementary products developed by marginal actors. Arguably, such marginal products can be discontinued easier than innovations in mainstream products driven by actors higher up the organisational hierarchy.

In line with previous research, we find that the position of the actor matter, although not as we expected. Instead of using unobtrusive tactics (Daudgeos, 2013), our peripheral actor relies primarily on obvious influencing tactics such as manipulation through lobbying. Moreover, for our peripheral actor, the key concern is not the illegitimacy of the product innovation (Doherty & Heller, 1994), but its own legitimacy challenges. As such, the actor uses product innovation as part of a wider effort to deal with its own legitimacy challenges. For example, the cognitive alignment sought through internal relationship building served not only to align the process of product development for this particular product, but also as a platform for future product development within the unit.

Relevance

For product innovation literature, we demonstrate the value of using the institutional lens in examining how product innovation happens in firms. Success of product innovation is generally measured at firm level and post product development (Brown and Eisenhardt, 1995). However, the firm is constructed of a variety of different groups and individuals with different interests and requirements (Weissenberger-Eibl and Teufel, 2011). For the innovating business unit, the "success" of innovation can be assessed in terms of changes on the position of the unit within organisational hierarchy which influences the unit's ability to access corporate resources. Moreover, the perceived success of the innovation is critical during product development to ensure that the product is allocated resources and support. Thus during development, and for the innovating actor, success often means whether sufficient resources are allocated to development. Alignment with the strategic interests of the firm as a whole is only one dimension. Cognitive and moral alignments are also critical to ensure that the innovation is seen as legitimate, and that resources and support are allocated to allow the innovation to reach the market.

Our findings also draw attention to the range of tactics that marginal organisational actors can use to gain legitimacy through product innovation activities, and to the trade-offs that emerge from pursuing different types of legitimacies simultaneously. Such trade-offs were first suggested by Schuman (1995) but are not yet explored at large in existing research.

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