

# Unfocused factories as outcome of deliberate strategic management decisions

*Richard Luetzner (richard.luetzner@unisg.ch)  
University of St.Gallen*

*Dr. Lukas Budde  
University of St.Gallen*

*Prof. Dr. Thomas Friedli  
University of St.Gallen*

## Abstract

Whilst focus is widely accepted as leading to superior performance, little is known about why factories exist that are not focused. This paper aims at improving our understanding of this phenomenon based on a single case study research design. Specifically, we investigate the motivation behind strategic decision making that leads to unfocused factories. The reasoning behind such decisions is concerned not only with site-level performance but also takes firm-level outcomes into account. Our research makes propositions about unfocused factories and thus contributes to the factory focus literature and might point into the direction of a new research path.

**Keywords:** Manufacturing strategy, factory focus, unfocused factory

## Introduction

Only little is known about why some factories are not focused while others are (Ketokivi and Jokinen, 2006). A focused factory is one with “a limited, strategically linked, and internally consistent set of demands that derive from the plant's products, processes, customers, and suppliers” (Pesch, 1996, p. 33). Over 40 years after its introduction, the concept of focus is widely accepted as a major theme in manufacturing strategy literature (Bozarth, 1993; Hallgren and Olhager, 2006; Pesch, 1996). According to Ketokivi and Jokinen (2006), normative literature even prescribes factories to focus in order to achieve superior performance. In fact, researchers have shown that there is a positive relationship between focus of a factory and its performance (e.g. Bozarth, 1993; Pesch and Schroeder, 1996; Richardson et al., 1985; Vokurka and Davis, 2000; Wathen, 1995). Despite those findings, the focus concept has not found much application in practice and explanations for this are rare (cf. Ketokivi and Jokinen, 2006).

Hayes and Pisano have argued that factories can be unfocused but still deliver high performance (Hayes and Pisano, 1994). Bozarth and Edwards came to the same result and saw the decision not to focus a factory rather as result of a deliberate strategic move

(Bozarth and Edwards, 1997). This idea was taken up by Ketokivi and Jokinen who propose that in certain operating environments and with certain competitive strategies, focused factories may not be desirable or even possible. In such cases, factory performance must not be negatively affected by not being focused (Ketokivi and Jokinen, 2006).

However, previous research has associated factory focus decisions, may it be in favour of or against focus, with the respective factory's economic and operational outcomes. None of the extant literature relates the factory focus decision to positive outcomes on other levels. We view this as a research gap in understanding the phenomenon of unfocused factories. Since the decision whether to focus a factory or not does not lie within the responsibility of the respective factory itself but within the responsibility of higher level management, this management's motivation for not focusing a factory is examined.

We motivate our research with the lack of explanatory power of existing factory focus literature on understanding why unfocused factories exist. This is the more relevant since Skinner himself saw focus as only "one way to compete" (Skinner, 1974, p. 119). Deliberately leaving a factory not focused might be another way to obtain competitive advantages. In such cases, the factory's operational or financial performance might not be the most relevant argument.

The focus of this paper is put on understanding the motivation of management not to focus a factory. This allows concentrating all efforts on this goal and collection of specific data during the exploratory case study design applied. Consequently, this paper is dedicated to answering the following research question: What motivates management to not focus a factory?

The remainder of this paper is structured as follows: First, a brief literature review on focused factory is presented, specifically addressing the phenomenon of unfocused factories. Also, a research framework for this matter is presented. Second, the applied case study method is described. Third, results from the case study analysis are presented. Fourth, those findings are discussed regarding their implications. Finally, we close this paper with a brief conclusion of what has been done and an outlook on further research.

### **Literature review and research framework**

Skinner (1974) presented his concept of factory focus as one possibility to improve productivity and competitiveness of US manufacturing. In his eyes, a focused factory "will outperform a conventional plant [and] can become a competitive weapon because its entire apparatus is focused to accomplish the particular manufacturing task demanded by the company's overall strategy and marketing objective" (Skinner, 1974, p. 114). He later specified what he meant by that: "a factory is focused if its entire set of manufacturing policies, i.e., its structure, is directed toward one, simple manufacturing task. This has nothing to do with size, it has everything to do with design of the system. Focus is a state of mind and focusing is the management process of designing a coherent structure to accomplish a strategic task" (Skinner, 1996).

The relationship between focus and performance is maybe the best investigated aspect of Skinner's concept. Positive effects of focus stem from the avoidance of trade-off relations among competitive priorities, avoidance of incompatibility among people, policies, equipment and needs as well as from the simplicity and repetition of the manufacturing task Skinner was referring to (Bozarth, 1993; Collins and Schmenner, 1993; Hayes and Schmenner, 1978). Focus was associated with lower failure rates of manufactured products, reduction of lead times and improvement of delivery dependability, inventory reduction, higher profitability, lower work-in-process and higher

throughputs, better performance in key operational measures (cost, quality, dependability, and speed) and for a set of financial measures (profitability level, returns, and growth) as well as reductions in direct labour (Ahmadi and Matsuo, 1991; Richardson et al., 1985; Ruwe and Skinner, 1987; Shafer and Oswald, 1996; Venkatesan, 1990; Vokurka and Davis, 2000).

Facing such persuasive findings, only few researchers have tried to find advantages of being not focused. Ketokivi and Jokinen (2006) examined the relationship between focus and a range of environmental and business contingencies. The authors make four propositions to explain their observations and note: “while focus seems to be associated with higher performance, it is not always the best strategy; there are other viable alternatives” (Ketokivi and Jokinen, 2006, p. 268). Schroeder and Pesch (1994) report that among the more than 60 manufacturing plants studied, they found several plants with a low degree of focus but with high profits. The authors conclude that such plants “though somewhat unusual, illustrate that focus is not required for high profitability” and that “focus is not an appropriate strategy for all facilities” (Schroeder and Pesch, 1994, pp. 77–78).

The studies mentioned so far causally bind the advantageousness of factory focus decisions to the outcome on factory level. Bozarth and Edwards (1997) link focus decisions to deliberate strategic decisions. They report about a Japanese company that sacrificed short-term profitability of a factory in order to build up a long-term market presence with a new technology that was still lacking a dominant application of customer group. One factory was assigned the role of a “swing” site that overtakes unrelated duties to ensure higher degrees of focus in the other factories of the manufacturing network.

Similar argument to differentiate between outcomes on site level and outcomes on a higher network level has been brought up in the discussion on manufacturing networks by Colotla et al. (2003). According to the authors, optima on site level might be of advantage for the single factory, but might be as well a disadvantage on network level and vice-versa.

We build our approach on the insights of Bozarth and Edwards (1997) and Ketokivi and Jokinen (2006) and the idea of different outcomes on separate levels introduced by Colotla et al. (2003). We are addressing the advantageous outcomes on firm level management expects from not focussing a factory as its motivation for such decisions. Taking into account that certain contingencies exist that are relevant for focus decisions, we control for the specific context of such decisions. Furthermore, the deliberate strategic reasoning character of the focus decision is relevant for our research. Finally, negative effects of not focusing the factory must be included.

### **Case study method**

This paper aims at identifying the motivational logic underlying decisions to not focus a factory. More precisely expressed, we ask why managers deliberately tolerate lower site performance associated with a lack of focus. Since we engage in creating new theory on the behaviour of companies regarding factory focus, a qualitative case study research approach according to Eisenhardt (1989) is followed.

### *Study design*

Case data stem from several workshops including semi-structured interviews with the management of one division of an international company in the process industry. All workshops were conducted by a team of three researchers. Information gathered in the course of all workshops was logged by one researcher. The other two researchers took field notes. After the workshops, the team of researchers reviewed and discussed their

notes. A document with field notes, which all three researchers agreed upon, was composed for each workshop. Open questions were forwarded to the workshop partners and answered either via e-mail or were discussed in the following workshop. The answers were added to the field notes document. This research design allowed for systematic and more objective data collection and eventually contributes to the reliability of the case study approach (Gibbert et al., 2008). Further material (e.g. archival data) was gathered to allow for triangulation of findings (Yin, 2003).

### *Case selection*

Case company selection has a certain impact on the research quality (Yin, 2003). Whereas multiple case studies are said to best contain between four and ten cases, single case studies focus on gaining insights from researching a single object (Eisenhardt, 1989; Yin, 2003). In accordance with Yin (2003), we've chosen to apply a single case study design for the following reasons: First, a single case appears to be sufficient for demonstrating the lack and also the potential of research into a direction that has been widely ignored by researchers. Second, the case company represents an extreme case. The selected case company regularly chooses to not focus its factories on an established basis. We consider this being an extreme case since it is clearly unorthodox. Third, the case company allows us to research on the phenomenon of unfocused factories as outcome of a deliberate strategic decision making. We view this as a hard to access research topic in general.

The selected case company is a polymer processing manufacturer organised in several global market regions and different specialised product divisions in a matrix structure. Each factory reports to the head of the region where it is located and to the head of the division the factory belongs to, i.e. the factory is owned by the division. All factories are organised as cost-centres and overall manufacturing responsibility for the factories lies within the respective division.

### *Data analysis*

Case data were reviewed and discussed within the group of researchers and with managers of the case company. Findings were structured along the dimensions of the research framework. Results from the case analysis were reviewed and compared with findings from extant factory focus literature. In the subsequent section the findings are presented. We derive propositions on the motivations for not focusing a factory for each element of the research framework.

## **Findings**

### *Deliberate strategic decision making*

The company implemented certain guidelines and a standardised process for the internationalisation of its businesses. Each division planning to enter a new market must report this desire to the headquarters. Headquarters reviews the company's footprint and plant capacities to evaluate whether an existing factory of another division could serve as a bridge head into the targeted market. A factory qualifies if it provides excess capacity and access to the respective target market. Both divisions are asked to provide information about the possible cooperation: the division owning the factory must demonstrate whether and if yes, how, it wants to use the spare capacity in the near future. The division willing to go abroad must provide data on the expected production volumes, the required production area, the business case behind this expansion, the reasoning of entering the new market etc. Taking into account alternative investment plans, i.e. building up a new factory, the overall benefit for the company is considered in the final decision making. In cases where an already existing factory will be hosting another division's production, this

factory will – per definition – become an unfocused factory since each division is engaged in different markets, with different products, customer requirements and often even different technologies.

In such cases, the focus of an existing factory is not lost over time with factory age (Ketokivi and Jokinen, 2006) or due to “gradual, uncontrolled product proliferation” (Bozarth and Edwards, 1997, p. 162) and focus regression (Hill and Duke-Woolley, 1983). Rather, it is lost as result of an established process that integrates perspectives of site level, division level and firm level. It is also shown that the decision whether to focus or not lies not within the competence of the factory itself (cf. Wathen, 1995). Thus, we offer the following propositions from these findings:

*P1 – Unfocused factories can be the result of a deliberate strategic decision making targeted to the further internationalisation of a firm instead of being the outcome of evolutionary developments and focus regression.*

*P2 – Focus decisions are not made on site level but on firm level which asks for integrating others than only site-level outcomes.*

### *Contingencies*

As mentioned above, there are two requirements that must be fulfilled to unfocus a factory of the company: Excess capacity and access to market. Furthermore, the target market must be currently too small for making an own factory an economically reasonable option for the entering division. However, the market must also be in a growth stage so that it provides the option for making an own factory possible in the future. Markets are entered in an early stage which is in line with corporate strategy. It prescribes to serve customers locally from local factories and to enter respective markets early before global competitors do. The approach described above finds application worldwide and has been employed for several decades already.

In such cases, unfocused factories are not related to volatile and uncertain environments but are related to capacity utilisation rates (Ketokivi and Jokinen, 2006). Also, it is associated with yet unserved rising markets that have certain potential and are decided to enter at an early stage. The focus decision then is not bound to further geographical contingencies (Ketokivi and Jokinen, 2006). We derive the following proposition from our findings:

*P3 – Unfocused factories can be used to enter small but growing markets where a dedicated factory is strategically needed but not economically feasible, and an already existing factory is ready for being leveraged.*

### *Firm-level advantages*

Since the company does not want to license their products or does not seek any strategic partnership with local firms, wholly owned subsidiaries are the only accepted mode of foreign market entry. However, high initial investments and overheads, which would make the market entry a losing bargain, may hinder tapping a new regional market for some divisions. The factory giving up its focus to host another division represents a compromise the company takes. Not losing to serve a growing market and establishing market presence before other competitors do add up to benefits from sharing fixed costs and learning advantages through leverage of locally created knowledge shared with the other division to quickly familiarise it with the local market. Eventually, it is the goal of the company to use an existing factory as start-up hub for other divisions that, when market potentials are given, later found their own factory in the market and let the factory re-focus. This is, since certain disadvantages on site-level exist that have to be traded off with firm-level advantages.

In such cases, a focus decision is not bound to the outcome on site-level, i.e., to factory performance, as has been the case in previous studies (e.g. Ruwe and Skinner, 1987; Vokurka and Davis, 2000). Rather, opportunity costs of the focus decision are taken into account as well. Similar to (Sheu et al., 2012; and Sheu and Krajewski, 1996), it is also acknowledged that focus is associated with further costs in form of investments, may it be duplication of production resources or, as in this case, the investment in a new factory or at least a separated factory-within-a-factory. Such investments required for achieving certain benefits of focus must also be taken into account when making focus decisions. Opportunity costs relate to the sharing of fixed costs and economies of size (e.g. Skinner, 1974) as well as organisational learning. The following proposition is derived from those insights:

*P4 – Focus decisions are causing costs and opportunity costs from not realised benefits on firm-level that must be taken into account when deciding whether to focus a factory or not.*

#### *Site-level disadvantages*

Management of the company is fully aware of certain disadvantages of actively unfocusing an existing factory. First of all, management on site-level and firm-level perceives such unfocused factories, which are called shared factories, as more complex and harder to manage. The company thus derived from qualitative analysis of such factories, that a plant leader should not have more than 500 employees and workers, to restrict the degree of unfocus. Another negative effect going along with unfocused factories that serve different divisions is the inaccuracy of cost allocation to products. In fact, cost allocation issues cause high coordination efforts related to unfocused factories. Finally, the re-focusing of an unfocused factory with the exit of one of the divisions is a highly political issue. The division grown enough to exit the factory leaves behind a factory with heavily slumped capacity utilization and sometimes massive overheads.

Literature relates to many disadvantages associated with a factory being not focused (e.g. Ruwe and Skinner, 1987; Skinner, 1974; Venkatesan, 1990). Management of the case company is fully aware of negative outcomes on site-level associated with unfocusing a factory. Nevertheless, it is agreed upon that, looked at it from an overall level, the decision to unfocus a factory leads to higher benefits for the firm. Our last proposition thus reads:

*P5 – Unfocused factories cause negative effects on site-level which are offset by positive effects on firm-level.*

#### **Discussion**

Based on a single case study research design, we have demonstrated that being not focused might be the result of a deliberate strategic decision making. In fact, companies might have a standardised process for taking such decisions repeatedly. We have investigated the motivation to behave differently than literature suggests. Previous research has mainly considered factory-related outcomes for their evaluation whether or not a factory should be focused. The case showed that a firm might take into account other outcomes than those directly associated with the factory. In fact, learning potentials and economies of size, strategic goals like early market entry, and overall economic arguments and investment plans are considered when making decisions to unfocus a factory. Whilst companies acknowledge that there are disadvantages on site-level stemming from such decisions, they value the overall benefits for the firm higher than site-level disadvantages. Thus, they motivate their decisions with positive outcomes of

strategic decisions for the overall firm instead of simply arguing with disadvantages from being not focused on site-level.

Such decisions were found to be linked to specific environmental contingencies, i.e., small but growing markets. Research has missed to address specific situations where the focus concept might be suitable and where it might be of less advantage.

## Conclusion

This paper contributes to the factory focus literature. Previous research has widely ignored addressing the phenomenon of unfocused factories. The paper at hand is among the first to investigate why unfocused factories exist and what the rationale behind them is. We have chosen an exploratory single case study research design to build tentative theory on the phenomenon of unfocused factories. The chosen method is in line with other research on this topic and suitable for the kind of research question as has been demonstrate earlier.

Nevertheless, there are limitations to our research. A broader empirical base with maybe four to eight case studies would add much to the generalisability of the findings. Also, our findings are limited to the internationalisation and derived from a market-focused company serving its local customers from factories that produce the entire final product. In manufacturing networks following other types, e.g. a process-focused network, positive firm-level effects of being unfocused might not offset site-level disadvantages of being not focused. Further, there might be other situations that were not addressed in this paper where not focusing a factory is not advisable.

Further research needs to be conducted for properly understanding unfocused factories. Such research might want to address questions like the following: “What are specific situations where not focusing a factory is of advantage for the overall firm?”, “How are disadvantages on site level traded off with advantages on firm level?”, “How are those advantages and disadvantages valued and calculated?”, “What are contingency factors for such focus decisions?”, “How often are such focus decisions reviewed and focus decisions adapted over time?”, “How are target systems and performance measurement tools adjusted to such focus decisions?”, and “How do unfocused factories organise their operations with different manufacturing tasks?”.

Our findings are relevant for researchers since they point at a new path of research related to the concept of factory focus. Better understanding the motivation for unfocused factories would help further developing a robust concept of factory focus.

## References

- Ahmadi, R.H. and Matsuo, H. (1991), “The Line Segmentation Problem”, *Operations Research*, Vol. 39 No. 1, p. 42.
- Bozarth, C. and Edwards, S. (1997), “The impact of market requirements focus and manufacturing characteristics focus on plant performance”, *Journal of Operations Management*, Vol. 15 No. 3, pp. 161–180.
- Bozarth, C.C. (1993), “A Conceptual Model of Manufacturing Focus”, *International Journal of Operations & Production Management*, Vol. 13 No. 1, pp. 81–92.
- Collins, R.S. and Schmenner, R. (1993), “Achieving rigid flexibility: Factory focus for the 1990s”, *European Management Journal*, Vol. 11 No. 4, p. 443.
- Colotla, I., Shi, Y. and Gregory, M.J. (2003), “Operation and performance of international manufacturing networks”, *International Journal of Operations & Production Management*, Vol. 23 No. 10, pp. 1184–1206.
- Eisenhardt, K.M. (1989), “Building Theories from Case Study Research”, *Academy of Management Review*, Vol. 14 No. 4, pp. 532–550.
- Gibbert, M., Ruigrok, W. and Wicki, B. (2008), “What passes as a rigorous case study?”, *Strategic Management Journal*, Vol. 29 No. 13, pp. 1465–1474.

- Hallgren, M. and Olhager, J. (2006), "Differentiating manufacturing focus", *International Journal of Production Research*, Vol. 44 No. 18/19, pp. 3863–3878.
- Hayes, R.H. and Pisano, G.P. (1994), "Beyond World-Class: The New Manufacturing Strategy. (cover story)", *Harvard Business Review*, Vol. 72 No. 1, pp. 77–87.
- Hayes, R.H. and Schmenner, R.W. (1978), "How should you organize manufacturing?", *Harvard Business Review*, Vol. 56, pp. 105–118.
- Hill, T.J. and Duke-Woolley, R.M.G. (1983), "Progression or Regression in Facilities Focus", *Strategic Management Journal*, Vol. 4 No. 2, pp. 109–121.
- Ketokivi, M. and Jokinen, M. (2006), "Strategy, uncertainty and the focused factory in international process manufacturing", *Journal of Operations Management*, Vol. 24 No. 3, pp. 250–270.
- Pesch, M.J. (1996), "Defining and understanding the focused factory: A Delphi survey", *Production and Inventory Management Journal*, Vol. 37 No. 2, p. 32.
- Pesch, M.J. and Schroeder, R.G. (1996), "Measuring Factory Focus: An Empirical Study", *Production and Operations Management*, Vol. 5 No. 3, pp. 234–254.
- Richardson, P.R., Taylor, A.J. and Gordon, J.R.M. (1985), "A Strategic Approach to Evaluating Manufacturing Performance", *Interfaces*, Vol. 15 No. 6, pp. 15–27.
- Ruwe, D.M. and Skinner, W. (1987), "Reviving a Rust Belt factory", *Harvard Business Review*, Vol. 65 No. 3, pp. 70–70.
- Schroeder, R.G. and Pesch, M.J. (1994), "Focusing the factory: Eight lessons", *Business Horizons*, Vol. 37 No. 5, p. 76.
- Shafer, S.M. and Oswald, S.L. (1996), "Product-focused manufacturing for strategic advantage", *Business Horizons*, Vol. 39 No. 6, p. 24.
- Sheu, C. and Krajewski, L. j. (1996), "A heuristic for formulating within-plant manufacturing focus", *International Journal of Production Research*, Vol. 34 No. 11, p. 3165.
- Sheu, C., Krajewski, L.J. and Cai, G. (2012), "A heuristic for designing manufacturing focus units with resource considerations", *International Journal of Production Research*, Vol. 50 No. 6, pp. 1608–1623.
- Skinner, W. (1974), "The focused factory", *Harvard Business Review*, Vol. 52 No. 3, pp. 113–121.
- Skinner, W. (1996), "Manufacturing Strategy on the 's' Curve", *Production and Operations Management*, Vol. 5 No. 1, pp. 3–14.
- Venkatesan, R. (1990), "Cummins Engine Flexes Its Factory", *Harvard Business Review*, Vol. 68 No. 2, pp. 120–127.
- Vokurka, R.J. and Davis, R.A. (2000), "Focused factories: Empirical study of structural and performance differences", *Production and Inventory Management Journal*, Vol. 41 No. 1, pp. 44–55.
- Wathen, S. (1995), "Manufacturing strategy in business units: An analysis of production process focus and performance", *International Journal of Operations & Production Management*, Vol. 15 No. 8, pp. 4–13.
- Yin, R.K. (2003), *Case Study Research: Design and Methods*, SAGE.