The investment-fit-performance triangle:
The relationships between investment, strategic fit and performance in service organisations

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Abstract
This paper presents empirical research within eight strategic business units (SBUs) from six service organisations investigating the relationship between investment, strategic fit and business performance. The research found six significant relationships within the investment-fit-performance triangle. 'Process investment' seems to have the most significant impact on strategic fit and business performance of all the variables studied. 'Environmental initiatives investment' has a less significant impact on fit and performance, both investment in 'people' and 'service/product development' only have a limited impact on fit and no impact on performance.

Keywords: *Investment; Performance; Strategic fit; Operations strategy; Service operations; Case/ field study*

Introduction
Fit is the linkage between an organisation's competitive priorities, operations strategy and delivery system (Hayes and Wheelwright, 1984; Hill and Hill, 2009). The process of achieving fit with a firm concerns identifying, prioritising, communicating, achieving commitment to and implementing initiatives on two dimensions (Miller, 1981; Stephanovich and Mueller, 2002):

- *External fit* - develops when actions and interests of employees are focused upon shared organisational goals, which helps align the organisation with its external environment
- *Internal fit* - consistency between operations strategy and overall business strategy by aligning employees so that they are metaphorically driving in one direction.

The need for fit is implicit in almost every operations strategy study even though it has received little explicit examination within the research to date. Previous studies have mainly looked at manufacturing operations with the limited service operations research looking at the external fit-performance relationship (Nayyar, 1992; Smith and Reece, 1999) and how to measure, manage and maintain internal fit (Hill and Brown, 2007; Hill and Cuthbertson, 2011). This research starts to address some of these gaps by investigating the investment-fit-performance triangle by asking three

related questions: (1) How does investment impact internal strategic fit? (2) How does investment impact business performance? (3) How does internal strategic fit impact business performance? To answer these questions, we discuss our findings from a three-year research project analysing eight strategic business units (SBUs) within six service organisations.

This paper starts with a discussion of the current research on the impact of investment on fit, investment on business performance and fit on performance and justifies the variables used within this research. It then describes how the eight case studies were selected, how the level of investment, internal fit and business performance was measured and how the relationships between these variables were identified. The findings from the eight case studies are then analysed and the significant statistical relationships between investment, fit and business performance that exist across the case study database are identified. These relationships are then discussed using evidence collected from the eight case studies to challenge and explain the statistical relationships identified and develop six theoretical propositions about how investment impacts fit and performance. Finally, we concluded with a discussion of the research limitations and future research opportunities.

Assessing the relationships between investment, fit and performance

Table 1 summarises the research to date to understand the impact of investment on strategic fit. This highlights a number of points. Firstly, all studies found that investment supported by strategic fit leads to increased performance. Secondly, no studies have looked at the direct impact of investment on fit. They have all looked at how investment and fit can support each other to improve performance. Secondly, all the research has looked at the relationships between investment, external fit and performance in manufacturing firms. Thus none have looked at service firms or internal fit. Thirdly, all studies have only looked at one type of investment and therefore miss out on the contextual richness of the practice-performance relationship (Sousa and Voss, 2008).

As well as investigating the 'collective' impact of investment and strategic fit on business performance, a number of studies have looked at the direct impact of investment on performance as summarised in Table 2. Again, a number of conclusions can be drawn from this analysis. Firstly, no studies have looked at the impact of investment on a firm's competitiveness, they have only investigated its impact on operational performance (operational capability, efficiency, productivity, cost and/or process flexibility) and financial performance (sales, profit, return on assets, return on equity and/or return on capital employed). Secondly, they have looked at different types of investment than those shown in Table 1 by assessing the impact of people, process, information technology (IT), reducing environmental impact and marketing/PR impact investment on business performance, rather than the impact of external fit with IT, supply chain and organisation size investment on business performance. Thirdly, although significant positive relationships were found between performance and service/product development (Bismillahir et al., 2012), marketing (Nath and Ramanthan, 2010), environmental impact (Iwata and Okada, 2011) and process investment (Morita et al., 2011), this has not been the case in all studies. For example, performance was not significantly improved by IT investment (Beccalli, 2007) investment in people (Ankarhem et al., 2010) or some aspects of marketing investment (Niromand et al., 2012). Finally, again, as with the research shown in Table 1, all studies only look at one type of investment and therefore miss out on the contextual richness of the practice-performance relationship (Sousa and Voss, 2008).

Table 1

Research investigating the investment-fit-performance triangle in manufacturing organisations: research strategy, investment and strategic fit measures used and key findings (2001 - 2007)

Author (date)	Research strategy	Investment, fit and performance measures used							Key findings
		Investment		Strategic fit		Business performance			
		Type	Measure	Business strategy	Operations strategy	Operational	Financial	Competitiveness	
Rondinelli et al. (2001)	Empirical (survey of a number of multi-nationals)	Size of organisation	Sales revenue Number of markets	Competitive strategy	Market (customer selection) Operations strategy (location of operation, management style, organisation structure)	Cost Efficiency	Sales revenue	Market share	Increase in 'size of organisation' can reduce strategic fit' Reduced strategic fit can reduce operational performance ('cost' and 'efficiency'), financial performance ('sales revenue') and competitiveness ('market share')
Myers (2005)	Empirical (survey of a number of US and Japanese firms)	Supply chain	Flow of Information Flexibility Solidarity between suppliers (interest, action and support)	Competitive strategy	Manufacturing process (supply chain relationships)		Sales revenue		Firm performance is increases when the 'flow of information' and 'solidarity between suppliers' are supported by strategic fit
Byrd et al. (2006)	Empirical (survey of 672 firms)	IT	IT spend per employee	Company goals	Level of operations involvement (in product design, budget, operating philosophy and strategy) Level of operations influence (through IT)		Return on investment		Performance increases when strategic fit is supported by IT investment Firms with aligned IT and business strategies get greater 'return on investment' from their IT investment
Shibata and Nishihara (2007)	Empirical (survey of 95 firms)	Size of organisation	Resources (level and orientation) Growth of product shipments	Competitive strategy Organisational structure	Operations strategy (management structure		Sales revenue		Performance increases when strategic fit is supported by 'resources' (level and orientation)

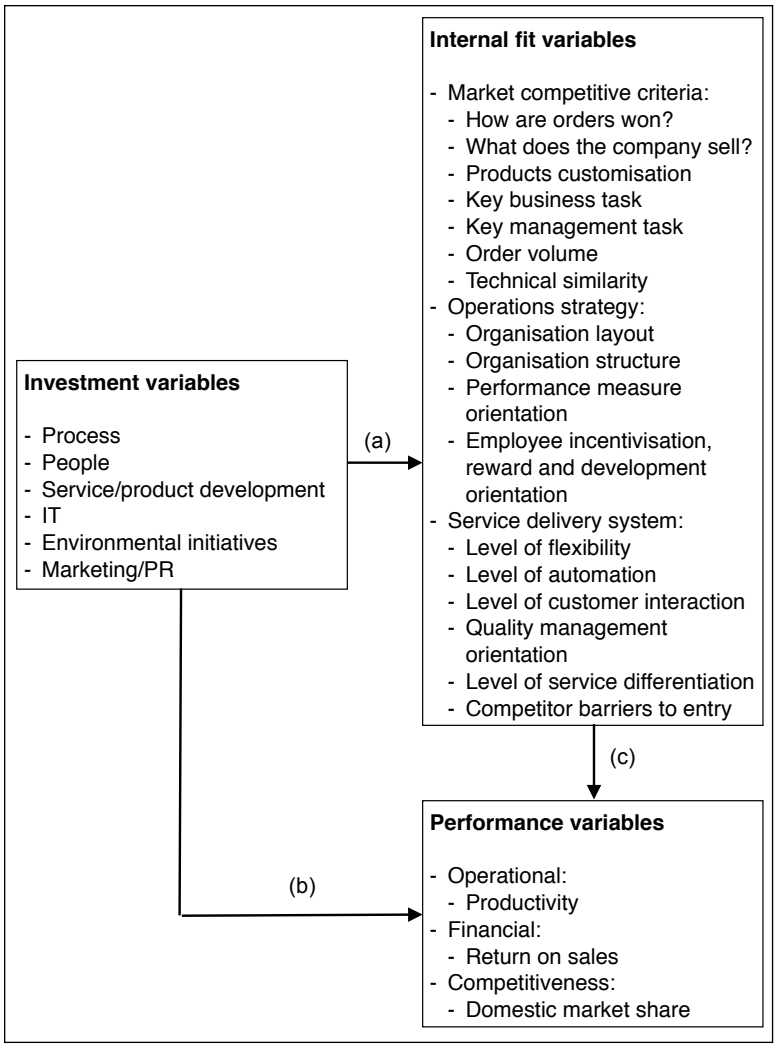
Table 2
Research investigating the impact of investment on business performance: research strategy, investment and performance measures used and key findings (2007 - 2012)

Author (date) grouped by type of organisation	Research strategy	Investment and performance measures used				Key findings
		Investment		Business performance		
		Type	Measure	Operational	Financial	
Service organisations						
Beccalli (2007)	Empirical (survey of 737 European banks)	IT	IT capability (network speed, number of computers per head, software and hardware)	Efficiency	Profit Return on assets Return on equity	There is no relationship between IT investment and performance, despite banks continually investing in IT
Bismillahir et al (2012)	Empirical (survey of 52 UK service firms)	Product/ service develop-ment	Number of R&D programmes		Profit Return on assets Return on equity	R&D positively impacts performance in technology-driven firms
Manufacturing organisations						
Ankarhem et al. (2010)	Empirical (survey of undisclosed number of Swedish investment grants)	People	Number of people Number of training and development programmes		Return on equity	Investment in people does not impact performance
Nath and Ramanthan (2010)	Empirical (survey of 102 UK firms)	Marketing/ PR	Level and type of communication Marketing capability Product diversification Market diversification	Operational capability Cost	Sales Return on capital employed	'Marketing capability' is a key determinant of performance Market-driven firms have higher performance than firms focusing solely on operational capabilities.
Iwata and Okada 2011)	Empirical (survey of undisclosed number of Japanese firms)	Environm-ental initiatives	Level of greenhouse gas emissions Level of pollution emissions	Efficiency Productivity	Sales Profit Return on assets Return on equity	Reduced 'environmental impact' increases 'productivity', 'sales' and, as a result, 'profit'
Morita et al. (2011)	Empirical (survey of undisclosed number of firms)	Process	Process flexibility (operational practices and strategic activities)	Process flexibility Efficiency Productivity		Process investment increases 'process flexibility' Process investment integrates 'operational practices' and 'strategic activities', which increases performance
Niromand et al. (2012)	Empirical (survey of 118 Tehran firms)	Marketing/ PR	Cost of customer communication Product diversification Market diversification		Return on capital employed	'Market diversification' does significantly impact performance 'Product diversification' does not have significantly impact performance

Measures of investment, internal fit and business performance

Figure 1 shows the variables used within this study to assess the: (a) impact of investment on internal fit, (b) impact of investment on performance, and (c) impact of internal fit on performance. The *investment variables* are consistent with those used in previous studies, the *internal fit variables* are adopted from the study by Hill and Cuthbertson (2011) and the *performance variables* have been used in previous research where they had high internal consistency.

Figure 1
Measures of investment, internal fit and performance used within this study



Case study methodology

Empirical research was conducted in eight service organisations using a case study methodology. Table 3 summarises the methodology used to select the cases, investigate them, compare the findings across the eight cases, identify the relationships between investment, internal fit and business performance and develop the propositions about how investment impacts internal fit, and investment and internal fit impact business performance. Rather than being randomly sampled, cases were selected using replication logic to ensure the research questions could be answered (Glaser and Strauss, 1967; Eisenhardt, 1989). The resulting case study database contained SBUs who currently perform differently to each other, have invested in different aspects of their business over the last 12 months and have varying organisational characteristics (see Table 4).

Table 3
Detailed description of the case study methodology based on Eisenhardt (1989)

Step	Summary
1. Getting started - definition of research?	What is the impact of investment on internal strategic fit and business performance? What is the impact of strategic fit on business performance? How does the impact vary for different investment, internal fit and performance variables? Are these relationships affected by the characteristics of the organisation itself or the nature of the markets it serves?
2. Selecting cases	Working with a steering group comprising 12 executives from 6 partnering organisations, 8 SBUs were identified to provide a range of case studies with differing levels of business performance across 3 variables: • Operational (productivity) • Financial (return on sales) • Competitiveness (domestic market share) These SBUs were also selected because they had invested differently in the previous 18 months on 6 aspects: Process, People, Product/service development, Information Technology (IT), Environmental initiatives and Marketing/PR Although it was difficult to identify this at the time, it was hoped the SBUs would have a range of internal strategic fit across 4 operations strategy variables and 7 delivery system variables: • Operations strategy (organisation layout, organisation structure, performance measure orientation, and employee incentives, rewards and developments) • Service delivery system (level of flexibility, level of automation, level of customer interaction, type of customer interaction, quality management orientation, level of service differentiation, and competitor barriers to entry) To control for extraneous effects of organisational size and market, operations strategy and delivery system complexity, the SBUs had a range of organisational characteristics across 11 variables: • Organisation size (sales revenue, number of customers and market segments served) • Operations strategy complexity (employees, functions and levels of hierarchy)
3. Crafting protocol	Existing literature on the relationship between investment, strategic fit and business performance was reviewed. Based on this, protocols were developed for the semi-structured interviews, writing up each case study and the final cross-case analysis (available from the authors on request).
4. Entering the field	Research within each case study started with a field visit to review preliminary information, verify access procedures, review background documents, agree confidentiality, and determine the sources of data to be reviewed (executives to be interviewed, observations to be made, documents and archival records to be analysed) All subsequent interviews were then conducted face-to-face at the companies' facilities. During these interviews, the research team identified further people, archival records, documents and reports to be interviewed or reviewed Each case study took 12 to 18 months to complete and involved 32 to 46 company visits, interviews with 20 to 41 executives, 124 to 219 direct observations and analysis of 42 to 127 documents and 81 to 351 archival records
5. Analysing data	The findings from the interviews and analysis of other data sources were written up into the protocol for each case study outlining the organisation characteristics, market competitive criteria, level of business performance, level of investment and level of internal fit (operations strategy and service delivery system) Within each case, recent investments and their impact on internal fit and business performance were identified and summarised in a table A 31 to 42 page report was written up for each case study, which was presented back to the participating organisation to help increase the validity of the findings As the findings from each case studies were written up, the overall case database was reviewed to ensure that the required range of characteristics were present. Once 8 cases had been investigated, it was felt that theoretical saturation had been reached and no more case studies were added
6. Shaping hypotheses	A cross-case analysis was completed across the 8 cases studies to identify statistically significant relationships between investment, internal fit and business performance variables The data within each case study was then revisited to help test and explain the significant relationships between investment, internal fit and performance variables that were identified
7. Enfolding literature	The emergent findings were then compared with those of previous research into investment, internal fit and business performance along with other relevant operations management and organisation theory research
8. Reaching closure	Iterative analysis continued until theoretical saturation was reached and new evidence ceased to appear

Table 4
Performance, investment and organisational characteristics of the case studies researched

Dimension and variable	Case study (grouped by performance level)							
	High return and high share		High return and low share		Low return and low share			
	1	2	3	4	5	6	7	8
Level of investment (£000s)	1,751	2,032	1,509	2,515	985	524	3,635	1,319
Organisational size and complexity								
Annual sales revenue (£000s)	4,872	6,514	5,853	4,817	3,126	1,924	2,967	2,355
Customers (000s)	1,108	684	1,420	785	749	421	462	556
Market segments	2	3	2	3	3	3	3	3
Employees	202	121	229	124	159	82	98	102
Functions	6	7	6	7	8	7	9	6
Levels of management hierarchy	26	12	31	8	6	11	17	12

Understanding the relationship between investment, fit and performance

The level of investment, internal fit and business performance variables were then correlated against each other with the significant relationships are shown in Table 5.

Table 5
Significant relationships between investment, internal fit and business performance

Dimension and variable	Investment				Business performance	
	Process	People	Service/ product development	Environmental initiatives	Financial	Competitiveness
					Return on sales	Domestic market share
Internal fit						
Operations strategy fit						
Organisation layout	*0.78				*0.68	*0.81
Organisation structure	*0.81				*0.73	**0.84
Employee incentivisation, reward and development		**0.84				*0.71
Service delivery system fit						
Level of flexibility	*0.78				*0.65	*0.74
Level of customer interaction	*0.77					*0.74
Type of customer interaction	*0.77					
Quality management	*0.75			*0.67		*0.69
Level of service differentiation	*0.77					*0.74
Competitor barriers to entry	*0.72		*0.68		*0.71	*0.79
Business performance						
Productivity				*0.83		
Return on sales	**0.89					
Domestic market share	**0.93					

Process investment. This seems to have the most significantly impact on internal fit and business performance of all the investment variables studied. It positively impacts two operations

strategy fit variables ('organisation layout' and 'organisation structure'), six service delivery system fit variables ('level of flexibility', 'level of customer interaction', 'type of customer interaction', 'quality management', 'level of service differentiation' and 'competitor barriers to entry'), financial performance (return on sales) and competitiveness (domestic market share). Evidence from the SBUs studied supports these findings. For example, the high level of 'process investment' within Company 2 enabled it to align its operations strategy and service delivery to the needs of its price-sensitive markets. Equally, its 'process investment' was instrumental in reducing its operating costs, which increased its 'return on sales' and made it more competitive. The same was true for Company 1 even though customer service (rather than price) was its key order-winner. Rather than making its processes less flexible and reducing its operating costs, its 'process investments' helped it orientated itself around its customers and made its delivery system more flexible. This enabled it to better support its markets and charge a higher price for its services. As a result, 'return on sales' and 'domestic market share' both increased. Based on these findings, we forward our first three propositions:

P1: 'Process investment' is significantly and positively related to two operations strategy fit variables: 'organisation layout' and 'organisation structure'

P2: 'Process investment' is significantly and positively related to six service delivery system fit variables: 'level of flexibility', 'level of customer interaction', 'type of customer interaction', 'quality management', 'level of service differentiation' and 'competitor barriers to entry'

P3: 'Process investment' is significantly and positively related to financial performance (return on sales) and competitiveness (domestic market share)

People investment. Unlike 'process investment', 'people investment' seems to only significantly impact one operations strategy fit variable ('employee incentivisation, reward and development orientation'), but does not impact either service delivery system fit or business performance. These findings are supported by the qualitative evidence collected from the case studies. For example, although Company 7 has invested in people more than any of the other organisations studied, fit is still low in its service delivery system and in all aspects of its operations strategy apart from 'employee incentivisation, reward and development orientation'. Equally, it still has the lowest 'return on sales' and 'domestic market share', and one of the lowest levels of 'productivity' within the SBUs studied. The reason for this seems to be that although 'people investment' helps create the motivation and capability for employees to improve fit and performance, the impact is not immediate. However, the significant relationship between 'employee incentivisation, reward and development' fit and 'domestic market share' suggests that in the long-term 'people investment' will positively impact competitiveness (domestic market share), but the impact is not immediate and takes a while. Based on these findings, we forward our fourth proposition:

P4: 'People investment' is significantly and positively related to one operations strategy fit variable ('employee incentivisation, reward and development'), but does not impact business performance

'Service/product development investment'. This seems to create fit within one service delivery system variable ('competitor barriers to entry'), but does not impact operations strategy fit or business performance. However, again the significant relationships between 'competitor barriers to entry' fit and both 'return on sales' and 'domestic market share' suggests that in the long-term 'service/product investment' may positively impact business performance in the long-term. Again, the qualitative evidence supports this. For example, the high investment in 'service/product development' within Company 7 is essential for supporting its markets, where service design and customer relationship are its key order-winners. This investment has increased 'competitor barriers to entry' fit as its service offering is now significantly differentiated from its competitors and is difficult to imitate. However, fit within the other aspects of its delivery system and its operations strategy have not changed. Equally, although its increased 'competitor barriers to entry' will help it compete more effectively in the future, its current business performance is still low. Based on these findings, we forward our fifth proposition:

P5: 'Service/product development investment' is significantly and positively related to one service delivery system fit variable ('competitor barriers to entry'), but does not impact performance

'Environmental initiatives investment'. This seems to only impact one service delivery system fit variable ('quality management'), but not operations strategy fit. Equally, it seems to increase operational performance (productivity), but not financial performance (return on sales) or competitiveness (domestic market share). However, again the significant relationship between 'quality management' fit and 'domestic market share' suggests that investment in 'environmental initiatives' can also help a firm become more competitive in the long-term. The qualitative evidence collected supports these findings. For example, the high 'environmental initiatives investment' within Company 3 initially helped to reduce the waste within its operations, which helped it improve 'quality management' fit and made it more 'productive'. However, it took a while for customers to become aware of these 'environmental initiatives' and only then did its 'domestic market share' start to increase. By contrast, within Company 8 these investments have helped increase 'quality management' fit and 'productivity', but its 'domestic market share' is still low as the investment was only recently done and market has not yet responded to these changes. Based on these findings, we forward our sixth proposition:

P6: 'Environmental initiatives investment' is significantly and positively related to one service delivery system variable ('quality management') and operational performance (productivity)

Conclusion

The outcomes of the research make several contributions to the existing base of knowledge in this area by identifying six significant relationships within the investment-fit-performance triangle. 'Process investment' seems to have the most significant impact on strategic fit and business performance of all the variables studied. 'Environmental initiatives investment' has a less significant impact on fit and performance, both investment in 'people' and 'service/product development' only have a limited impact on fit and no impact on performance. These findings offer more clarity than previous research about the relationships between a range of investment, fit and performance variables. They support the view that performance is related to 'process investment' (Morita et al.,

2011), but is not related to 'IT investment' (Beccalli, 2007) or 'people investment' (Ankarhem et al., 2010). However, they also challenges previous findings suggesting investment in 'marketing/PR' positively impacts performance, although these studies did look at different measures of financial performance such as 'sales' and 'return on capital employed' (Nath and Ramanthan, 2010; Niromand et al., 2012).

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