



How Far should a Work Force Be Multi-Skilled?

Making the Trade Offs Between Scope and Skill

Overview

Many organisations have made the decision to multi skill their workforce to drive up productivity. Some have experienced disappointing results. Others find unintended consequences occur that dilute quality and customer service. Recent research* studied the factors affecting these decisions.

Benefits, Costs and Trade-offs

When decisions are taken to change the scope and range of task completed by employees, such as by multi-skilling or outsourcing, the organisation is making a trade off between increased learning costs and reduced transactions costs.

Learning costs are costs such training, education, coaching, to get and keep a level of competence in the task required. Transaction costs are the costs required to manage and coordinate the flow of transactions.

It is unlikely that these costs behave in a linear way because of increasing complexity either in transactions, as specialisation increases, and in tasks, as scope and range of tasks is increased.

The decision about the trade offs is not straight forward, as is illustrated diagrams and text that follow.

Figure 1 illustrates case A. As scope is expanded from point A to point B, the

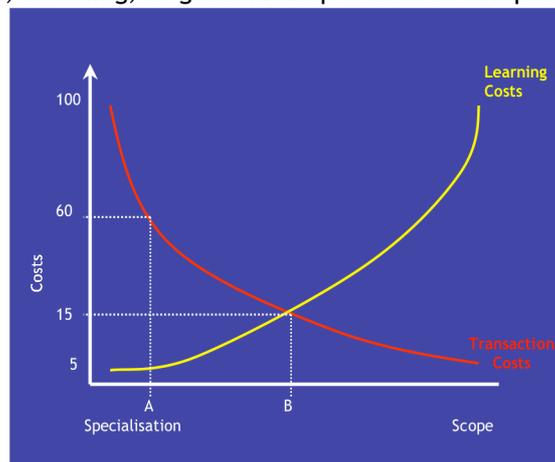


Figure 1 - Case A

transaction costs fall from 60 to 15, a productivity gain of 45. But this is partially off set by an increase in learning costs from 5 to 15, so the net productivity gain is 35.

As one approaches point B diminishing returns have begun to set in. Going beyond point B is sub-optimal as illustrated in case B and figure 2.

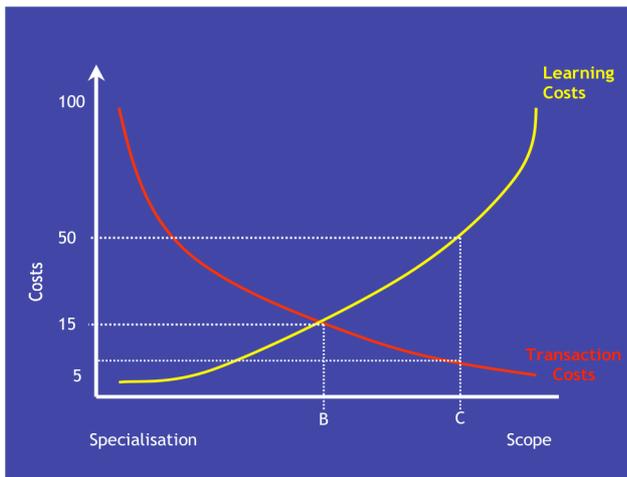


Figure 2 - Case B

Moving from point B to point C reduces transaction costs by about 10. However, this is accompanied by an increase in learning costs of about around 45. So, moving from point B to C, to achieve an increase scope actually has a net cost rather than a benefit, because we have proceeded past the optimum point.

The economics of the trade off depend critically on three key factors:

- **The cost of knowledge and learning**
The incremental costs of learning is low, only where tasks are not complex. Where complexity increases owing to the nature of the tasks, physical location, geography and so on, the incremental cost can be significant. The consequences of failing to invest sufficient resources in learning to match the complexity of the tasks, can lead to the often hidden costs of ineffectiveness, such as costs of poor quality through re-work and the opportunity cost of lost customers. Learning costs include indirect and back-office costs such as changing workflow management processes to support a multi skilled workforce.
- **Increased transaction costs between specialist operations**
As the level of specialisation increases, the transaction costs rise. The transaction costs include the costs of transport, communication, and coordination. Where specialist units increasingly do interdependent tasks, either internally or externally, for example, via outsourcing, the costs of the transactions rise. Increased scope should create opportunities to reduce transaction costs, for example by eliminating some co-ordination and workflow management tasks. (Providing there has been a sufficient investment in learning costs).
- **Sustainability of Knowledge Advantage**
Where competitive advantage is hard to defend, for example, where there is an absence of the protection of Intellectual Property Rights, the specialist operator may be vulnerable to competition from low cost imitators. When considering using external partners, for example, through outsourcing, in pursuit of productivity, it is important to consider the impact on competitive advantage.

Making the Trade Off

To be able to properly assess the opportunities, it is vital to be able to assess the shape of the cost curves and to ensure all the relevant costs are included. Informed decisions need a holistic and systemic view so that all the risks and consequences can be properly assessed and managed.

Implications

One of the problems with making decisions about how far to go with multi skilling is being able to identify the optimal point. This means being able to model the learning and transaction costs, including the opportunity costs.

When your organisation makes these decisions:

- How explicit and accurate are the assumptions about the behaviour of both learning and transaction costs?
- Have all the costs relevant to the decision been taken into account?
- Is there any evidence that the expected benefits have not been delivered?
- Are the explanations of shortfalls fully and satisfactorily explained and remedied?
- Is there evidence of sub optimisation, for example, unexpected falls in customer service levels? Do they appear to be intractable?

Any of the above may indicate sub optimisation.

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Footnote

Hui Liu, research associate GNOSIS. GNOSIS is work stream of Advanced Institute of Management (AIM). GNOSIS is part of AIM, a research led initiative reporting to the Prime Minister's Office focussing on the productivity and competitiveness of the UK.