TIØ4258 – Exercise 2
Group 45

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1 Innovation and Organizational Structure

a) Present two examples of employed divisional structure from two different cases and describe its advantages and disadvantages.

NoRAS

On page three of the NoRAS case description[1], the company's structure is described as follows: "The company is located in Namsos and consists of two production departments: one for microcontroller systems and one for the plastic casings for the control units. [...] In addition, the company has a small marketing-unit that visits customers." The company "develops and sells custom RC-solutions for industry purposes", which probably means neither of the production departments are anything like a product division. Or are they? It depends on the company's actual product, which is neither plastic casings nor microcontroller systems – however both of these are products which the company develops and produces. For the sake of argument let's say the company has one product line: "custom RC-solutions for industry purposes". Now the company has one product line, one geographical location (Namsos), one market it caters to ("the industry") and one set of support functions. Based on this, as well as what other information about the company that is provided by the case description up to and including Part 2, it would seem they employ a Product Team Structure, if we assume their Products are custom made RC-solutions and not the various components of such a solution.

The Product Team Structure allows NoRAS to organize teams around each individual order they get, providing their customers with the fully customized thing (which is what they are all about). A downside to this is that this obsessive attentiveness to customization could limit their total throughput of products.

Nordvestbygg AS

When NORDVESTBYGG AS start expanding, they use a geographical structure. In the case description of the structure during the initial expansion, the structure are described as "[...] focus on being represented in other cities as well as Ålesund. [...] all the acquired branches were working relatively autonomous, having their own management and making their own deals." This could be a good strategy for a construction company. The local branch will have good knowledge of the local laws and regulations and can adapt quickly to changes in the rules and regulations. However, this structure requires that each of the branches has a certain size. If they are too small you might end up with a lot of extra costs. For example the cost of a complete administration and management for each branch will cause a bigger overhead. Also the geographical structure might prevent knowledge exchange between the branches.

After a while Nordvestbygg AS had expanded to almost 400 employees and the company was undergoing a reorganization. This is described as "The employees were divided into 3 departments; project planning with ca 50 people, technical services with about 100 people and construction work with about 200. The other 20 people worked in sales and administration." This is product team structure where the different products are project planning, construction work, technical services, in addition to the sales and administration department. One of the main advantages is illustrated in the case when the company first tries to sell complete enterprises, products involving

[1] Part three, 1993-1994

all the different departments. When this strategy fails they could quickly change their business strategy and sell the product of each department by itselves. Another advantage is that you can gather or the knowledge and resources associated with each field in one place. This reduces the overhead connected to duplicate resources and could enhance the quality of the project.

b) For each case presented in 1-a, describe a different divisional structure the organization might choose, along with any advantages and disadvantages with it versus its current structure.

NoRAS

It's hard to make a good case in favor of circa 1993 NoRAS changing its corporate structure. One could even say they employ a functional structure, not a divisional one, at this point in time (circa 1993). So let's cheat and look to the future (circa 2000), at which point they lay plans to expand into the North American oil drilling market, which is notably different from the North-Western European offshore oil market.

NoRAS' product is still custom RC-solutions, yet the two markets they now operate in are so different that it would make sense for them to make the switch to Market Structure. This would allow them to better accommodate the different requirements for each of the markets they operate in. The switch would also increase horizontal differentiation within the company. It could also lead to a reduction in NoRAS' expertise within the North-Western European offshore market as their resources are split between the two markets, but this would be caused by them deciding to operate in two markets not that they change their divisional structure to accommodate this fact.

Remaining with the Product Team Structure would keep NoRAS' focus on their product (custom RC-solutions, the key here is "custom"), rather than the markets.

Nordvestbygg AS

When Nordvestbygg AS was bought by Norgesbygg AS in 1997 they were trying to enforce some very drastic changes. Perhaps in this case since the company was so prosperous, the new owners should not have tried to force the changes but instead they could have gone back to the original geographical structure. This way the Nordvestbygg branch could continue to operate more or less the same ways as before without being disturbed by the new owners. Implementing the knowledge exchange program mentioned in the case could also prevent the previously discussed disadvantages of the poor knowledge exchange that the geographical structure can result in. The fact that Nordvestbygg had almost 400 employees would also help with reducing the overhead of management. There could be made some cuts in the management, but the most essential parts would still be there.

2 Innovation and People

Job design is all about connecting various work tasks with fixed jobs. Good job design can increase motivation and improve performance.

Describe the difference between job enlargement and job enrichment

In short terms: Job enlargement involves giving the employee additional tasks to perform at the same difficulty and responsibility level as the ones they already are assigned. Job enrichment involves giving them more responsibility and control over their work, such as planning their own schedules, deciding how to perform their work, checking their own work or learning new skills.

Both these concepts (job enlargement and enrichment) are aimed at increasing intrinsic motivation in employees, which is to say the motivation that comes from the job itself, by enjoying the job. There are five key points that typically increase intrinsic motivation.

Skill variety If the employee has to use a larger, varied skill set to complete his or her tasks, he is less likely to get bored.

Task identity If the employee is involved in the work from beginning to end, as opposed to just being involved in a small fraction of the process, he is more likely to identify with the work, increasing motivation.

Task significance If the employee feels the work he is doing is important to someone, he is likely to be more motivated.

Autonomy If the employee has independence and power over how to perform his job, he may find it more enjoyable.

Feedback If the employee receives feedback on the quality and progress while performing his job, it's easier to be motivated.

Job enrichment focuses on skill variety, task identity and most importantly, autonomy. Job enlargement does not have a clear focus on any of these points, but one could argue that it partly focuses on task identity, involving the employee in a larger part of the process. One could also say it involves skill variety, because the additional tasks may require additional skills, but only to a certain degree, as the tasks are supposed to be of a similar difficulty and responsibility.

As mentioned, both methods aim to increase intrinsic motivation. However, job enlargement is a short-term measure, as additional simple tasks may get boring after a relatively short period of time. Job enrichment is a more long-term measure, as the points the method focuses on - mainly skill variety and autonomy - are aimed at keeping the employee interested and involved. Enrichment is not always applicable, however, as not all employees want more responsibility, and not all jobs have room for more responsibility, as it may decrease efficiency.

Imagine that you are a management team tasked with redesigning one or more jobs from one of the cases. Suggest three measures designed to increase the motivation of the company's employees. (If applicable, describe any assumptions you make.)

Assume we are the management of Arendal Verft AS. Traditionally, a typical job would be a place at some part of an assembly line. For a supervisor, it might be quality control of his subordinates. In the case description, some measures were taken to increase motivation. Below I will explain what these measures were, as well as explain why and how they helped. Finally, I will mention additional measures that could have been taken.

The management in the case decided to organize incoming orders as projects, where each project had a supervisor in the position of project manager, responsible for the economy of the project, as well as finding the right subordinates to work on it. The subordinates, or regular employees, would work full time on a project, while supervisors and specialists would be shared between projects if necessary. Organizing this way gives the employees a higher degree of task identity because they are involved in the entire project from beginning to end. Furthermore, supervisors have higher autonomy, because they as project managers have to select people to work on their project as well as see it through. They also have a higher degree of skill variety, because they have to take care of the economic aspect of the project as well. Arguably, this could also be said for the regular employees, as they might be included in tasks requiring different skills when they are a part of the entire project, as opposed to doing the same job on an assembly line for different projects.

Another measure that was taken was training. Project managers were required to take on trainees, and would as a result be allowed to log more hours, thus receiving a larger paycheck. A larger paycheck is always motivating, but I have chosen to focus on the intrinsic motivations rather than the extrinsic - that is, outer - motivations, such as pay. Taking on trainees gives the project managers a higher degree of skill variety, as it calls for pedagogical skills. It also gives the supervisors a feeling of task significance, because they have an impact on the future of the trainees. As far as the trainees are concerned, I assume that the case describes new employees who need to learn the job of a regular employee. However, this trainee model could easily have been deployed as a way of further learning for the already established employees, training them to become supervisors and later potentially project managers, giving them the aforementioned boons to motivation.

A final but important measure is the creation of a "reference group". This would be a group of representatives from the various "classes" of employees that could gather periodically and discuss possible ways of improving the way their jobs are performed. This gives the group of representatives increased autonomy, as well as variation in skill usage. The group could also act as an interface between management and the remaining employees for concerns and requests, as well as feedback. This group would then be able to experience increased task significance, bringing the voice of the employees to management. Easily accessible feedback would also increase motivation.

3 Innovation

Provide one example of incremental and radical change, from the provided cases. Explain the more important differences between them.

Incremental innovation is the act of making changes to existing products so that you can get as much value as possible from the product, without having to change the business model of the company much, or to make big investments into something new. While not sounding as such an important part of a business, incremental innovation can be very important to keep the business current, and to keep attracting customers. [page 16-19]

Radical innovation happens when a business comes up with a whole new idea, changing the business model, and how it's customers relate to the business. They can also be known as "game changers," changing how the game of the industry works. While radical innovation can be good for a company, it might not be worth investing a lot in, as the nature of radical innovation is that nobody can know what the next "big thing" is.

In the case study of Vest-Regnskap AB, there's an example of incremental innovation. As the company started, it used a computer system that was specially designed for VR. The administration started changing these out with new software, and added network systems, allowing remote personnel in the company.

The company Tungesvik Stålsveis AS has had more than one radical innovation during its history. After almost fifty years of building wooden boats, they changed their production line to be mechanical, and started building boats of steel. Sixty years later again, the new administration added a new division creating constructions in stainless steel, while the traditional boat building division was closed a year later, turning the company into something completely different.

Based on the information provided in the case description, show that one of the case-companies employ one of the four learning systems (value creation, improvement of processes, building competence, emerging strategies) and provide arguments for why they should change it (including both the advantages and disadvantages). (If applicable, describe any assumptions you make.)

The innovation of Bjørnsen & Sønn Støperier relied heavily on the building of competence in their workforce. Requiring key personnel to undertake further education, and all employees to spend time working with their customers to assess how the quality of their product affects products "down-stream", led to a significant increase in their technical ability. This was a large and costly move, but probably a necessary one when faced with increasingly diverse orders. It also opened up a new market in that oil companies, whose demands were higher than those of the shipping industry, became possible customers. In short, increasing the quality of their staff allowed Bjørnsen & Sønn to survive a change in the nature of their industry, as well as to enter a market with potentially higher profits.

There are also elements of emerging strategies in the case of Bjørnsen & Sønn, in that they pioneered the idea of purchasing training and maintenance along with a significant order of industrial equipment. While this added to the price, it also guaranteed that the tools would come to good use; presumably, the company that makes a tool will be able to teach the use of it to others, and a maintenance deal of five years removes the risk of costly equipment becoming useless shortly after its purchase.

If I were to suggest a change, it would be to move even more in the direction of emerging strategies. Rather than just purchase the safety of maintenance and training from their suppliers, why not offer similar services themselves? With the highly educated workforce that they accrued, it would probably be possible to offer consulting services to the rather particular oil companies. Doing so would not only present another stream of income, but also create a certain level of lock-in on the part of the oil companies, which could provide long-term safety to Bjørnsen & Sønn.

The risk of moving from a strictly-production company to one that also offers consulting services, would be that they might find themselves "spread too thin"; a talented factory worker is not necessarily as talented when it comes to customer relations, and hiring dedicated consulting staff would no longer piggyback on the general increase in competence at Bjørnsen & Sønn. Still, it seems like an idea worth exploring.

References

[1] Tim Torvatn, editor. *Teknologiledelse*. Pearson Publishing.