

# Free Resources and the resource-based view

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**Abstract:** In 1991 nobody really expected to discuss the question, if the real threat for the future of Microsoft will be an OS created by a student, distributed freely and developed by thousands of unknown helping hands. Thirteen years later, the question is no longer if Linux is a threat to Microsoft. Now, the question aims in a different direction. Today many great ICT-Players discuss how to use the “free resource” Open Source to generate yields and a sustainable competitive advantage. Vanguard of this evolution are Linux distributors. As the “commercial face” of Linux, it will be discussed, why and how these companies can create values and competitive advantages using “free” resources under a resource-based perspective.

## 1 Open Source and Strategic Management

Looking back on the evolution of Linux and other Open Source software projects it is obvious, that this is no longer software of minor quality or even a hobby-project [AM02; Dah04]. Open source software has grown up. Today Open Source is big business, but in comparison to proprietary software still small. As an economist, many subjects are worth keeping an eye on. In this short paper the focus lies on strategic management, especially on the question, if free resources can be the basis for sustainable competitive advantage. There are two well-established “views” for that question: The market-based view, created by Porter [Por99a; Por99b; Por01] and the resource-based view [Pen59; Wer84; Bar91; Gra91]. Both perspectives can help to find an answer to the research question. For example, is it shown by Porter how useful the market-based view is to explain many questions regarding the Internet bubble with the five-forces-scheme [Por01]. In another paper I figured out, how effective this perspective is to learn about new kinds of flexible strategic management from Linux distributors. I showed, how media corporations can learn using free resources to create value by bundling or reinventing their business models [Mue04]. Here, the advantage of the resource-based perspective is the new connection between non-rare even “free” resources and the classical theory. The paper is structured as follows: First, there is a short introduction to the resource-based view theory. Secondly, the extraordinary role of Linux distributors for open source software will be presented. Here, the question of strategy will be answered in a discussion about the use of free resources to create sustainable competitive advantages. Finally, the conclusions offer a short outlook on open research fields and possible transfer options.

## 2 The Resource-based view

Before discussing the relationship between resource-based view theory and free resources (as non-rare resources), we have to take a closer look at the theory itself. The basic ideas were formulated by Penrose [Pen59], Wernerfelt [Wer84] and Barney [Bar91] as an “outside-in-perspective” in opposition of the market-based view as an “inside-out-perspective”. The resource-based view theory is based on the assumption that a competitive advantage is the result of optimal resource allocation and combination in imperfect markets. Resources are (tangible and intangible) assets, skills, and (organizational) capabilities. The resources leading to competitive advantages have to be scarce, valuable, insubstitutable, appropriable and it has to be hard to imitate them. The mechanisms to protect the competitive advantage are: patents or other legal rights to protect intellectual property, long-run history, causal ambiguity, social complexity and asset specificity [e. g. PL03].

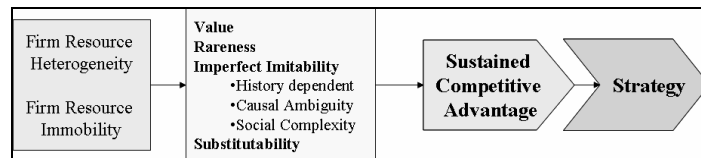


Figure 1- Resource-based view theory [Bar91, p. 112; Mue03, p. 233]

Resource-based theorists argue, that nearly all profits (the economic rent) can be attributed to the ownership of a scarce resource. There are two types of rents: Ricardian (scarcity) or Schumpeterian (entrepreneurial) rents. Ricardian rents are long-lived, whereas Schumpeterian are not. Nowadays, many derivatives of the resource-based view theory are known, such as the knowledge-based view [Gra96], the competence-based view (core-competence approach) [NW82; TPS97] and the organizational or dynamic capabilities approach [Gul98; EM00]. All these derivatives have the same basic approach regarding formulation of a corporate strategy. So Grant sums up: “*The essence of strategy formulation, then, is to design a strategy that makes the most effective use of these core resources and capabilities.*” [Gra91, p. 129].

### **3 Role of distributors in the open source community**

Distributors such as Red Hat, Mandrake, SuSE or Turbolinux are the “commercial face” of Linux or the Open Source software community in general. In opposition to the big software producers like Microsoft, Oracle, Adobe or SAP, the basic business model of Linux distributors today is primarily focused on the service business. On the other hand it is well known that even SuSE or Red Hat have or want to sell software “boxes”. Generally, the focus on the importance of the distributors in the Open Source community as gatekeepers to big (hard &) software business has changed. The big players IBM and HP in particular, as well as public institutions strive to find out, if Linux in combination with other open source projects (e.g. open office) is a real alternative or searching for a good Open Source business partner (e. g. IBM & SuSE). The best known example in Germany is the administrative decision of the City of Munich for Linux as client *and* server system in 2003.

Most Linux distributors and proprietary software producers are in the same position. If they do not sell enough distributions and/or services, they might have to leave the market or they will have to change their business model (such as SuSE, bought by Novell or SCO-Group, leaving the Linux market). So their competitive advantage should be based on the free resource or - as most of today’s Open Source business models are on top of the free resource - in combination with the free resources. But what does that mean for the question of “free resources”? Are Linux and Open Source any longer “free resources” in the sense of a public good or does the nature of Open Source change according to the needs of the business models of Linux distributors? This will be discussed in the next paragraph.

#### 4 Can “free resources” be the basis for competitive advantage?

As mentioned above, distributors have a similar position like proprietary software producers with service business. From that point of view, it seems to be quite simple to analyze their position with classical assumptions used by scholars for the resource-based view. But something is different: the core resources are free as discussed. The classical assumption, that a core competence or resource is the reason for sustainable competitive advantage, has to be questioned, because in case of Open Source this advantage cannot really be protected by the classical instruments (e.g. patents). Does that mean, Open Source software can not be a main resource for competitive advantage? On the one hand there is a clear “Yes”. That implies, that distributors often argue their business model [Wie01; Fin03] is not about developing and selling software. Rather it is more a service and knowledge-based business model. Consequently they consider their main resource, or more precisely their core competence, to be the knowledge to *use* and not to *produce* Open Source software. On the other hand there might be a clear “No”. Open Source Software is for distributors much more than a minor resource and so nearly all greater distributors employ software developers to foster the production of special features needed for their customers. Then, the core competence is the combination of their “special” Open Source software and their special knowledge (e.g. server-administration, installation-support). That means the Open Source software is a major resource. Following this thought, there are possibly wise strategies for distributors how competitive advantages can be protected extensively resulting from a business model deriving from a resource-based perspective. From a resource based point of view Collis & Montgomery are proposing three distinct strategies following the identification of valuable resources: Investing in these resources; upgrading and finally leveraging them [CM98, pp. 41-47]: *Investing in resources*: Especially Red Hat and SuSE invest a lot more than dump money in the further development of Linux. Besides their public commitment they support the development through the creation of so-called “Labs” which are the basis for programmers to develop new components without the pressure of a strong hierarchy. Furthermore important is the observation that the distributors stabilize a continuous investment in Linux.

*Upgrading resources*: As a simple example take the proprietary installation tool “YaST”. By “upgrading” free Linux distributions with proprietary software SuSE created great value for the customers as well as for itself. To survive the competition it might be necessary for distributors to add a lot more complementary resources apart from strengthening own resources. *Leveraging resources*: The third and last basic strategy in the sense of Collis & Montgomery is leveraging resources. In the case of Open Source software this could be entering new markets like the video console market, the car industry or even the household appliances market. But at the same time this could be very problematic for distributors, as these markets are typical embedded-system-businesses.

Another aspect, but not to be discussed here, is the question if proprietary software producers willing to employ Open Source software will have legal problems (e.g. Sitecom case) [Cif04] and would have to compromise their self image. The conclusion can be, that “free” does not mean an “open” resource to proprietary producers [Dah04, p. 19]. To shorten up, this is, besides economical questions, about copyright, debated explicitly by Lessig [Les99; Les02] or Harris [Har98]. After all does “free” from the resource based view does not mean without value or not to be guardable. Throughout the combination with other resources Linux distributors are even able to create scarce resources with free ones.

## 5 Conclusions

The discussion shows clearly, that Open Source is not a *real* free resource in a broader sense! But what makes the discussion so important? As shown in a parallel paper [Mue04], it makes no real difference reflecting the Open Source development from a resource-based or market-based perspective. In the sense of strategic management, it is a question of dealing with knowledge, software resources and new economic impacts on employing “free” and (today) non-rare resources as basis for sustainable competitive advantage [Tec00; Leo98]. It seems like playing a new kind of monopoly – a virtual one with a polypol of suppliers [Pik01]. Another aspect from a resource-based perspective is, that free resources with a high complexity are valuable, because “free” does not mean “*easy to use*”. Following this idea it is clearly shown, that business models like those of the distributors mentioned above can be preserved by upgrading the complexity as a protection-mechanism after all creating a new kind of scarce resources. In the end, the relationship between free resources and the resource-based view can be described as compatible and the theory leads to new insights how even free resources can be used like real rare resources.

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