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MAKING INFORMATION TECHNOLOGY STRATEGIC OUTSOURCING DECISIONS

The strategic decision, providing for creation of the information technology (IT), is presented in the article, strategic model of outsourcing and preconditions for taking the strategic decisions are considered.

Keywords: strategic model of outsourcing, strategy, matrix, adoption of effective solutions of outsourcing, key actions, appearing actions, primary activities.

Willcocks et al. article provides a strategic view of outsourcing decisions for Information Technology (IT). While its publication predated the publication of the Strategic Outsourcing Model (SOM) [1], the authors' recommendations conform quite well to that model, as this paper will demonstrate. For reference, the Strategic Outsourcing Model is shown (fig. 1) [1] and Making Effective Sourcing Decisions from the Willcocks et al. paper is shown (fig. 2) [2, p. 61].

As this paper will demonstrate, both models are based on the premise that the important factors in making strategic decisions for an activity are (1) the contribution of that activity to competitive advantage and (2) the strength of the organization's capabilities to perform the activity.

SOM states these factors more explicitly than Willcocks et al. and provides a clearer rationale for decisions based on the activity's location on a competitive-advantage-versus-organizational-strength matrix (fig. 1). Willcocks et al. utilize case studies to discern the proper decision for individual circumstances, but provide only a crude generalized model to explicate their findings (fig. 2).

In this paper, Willcocks et al.'s strategic perspectives and case histories will be related to the Strategic Outsourcing Model.

Comparison of Categories. The Willcocks et al. article gives two categories for an activity by stating:

An IT activity/service can be defined as a *Differentiator* or as a *Commodity.*

Activities which are differentiators provide a potential basis for competitive advantage; executing them particularly well is important to the firm.

An activity is a commodity if its execution does not distinguish the firm from a competitor in business offering and performance terms. This type of activity needs to be done competently, but no more [2, p. 62].

In comparison, SOM posits four categories: (1) Key, (2) Emerging, (3) Basic, and (4) Commodity. The Willcocks et al. article's Commodity category encompasses the SOM's Commodity and Basic categories. Their Differentiator category encompasses the SOM's Key and Emerging categories.

To demonstrate this, we consider Willcocks et al.'s statement:

In practice differentiators can quickly become commodities as competitors catch up or the basis of competition changes [2, p. 62].

Thus, differentiators are closely related to SOM's Emerging and perhaps Key categories. In SOM, it is stated that an activity in the Emerging category can become Basic or even Commodity, depending on developments in the industry regarding the ability for that activity to become a source of competitive advantage. The same might be true for a Key activity, though it is less likely to fall into those lower categories except perhaps for the passage of time and changes in the competitive framework.

The positing of the SOM Emerging category for some of Willcocks et al.'s differentiator IT activities becomes clearer when one considers their statements:

Looking at technical factors, a particularly critical issue is that of technological maturity. The concept of technological maturity derives from research by Feeny, Earl and Edwards. An organization is low on technology maturity when any of the following conditions apply:

– the technology is new and unstable in functions, specification, and performance;

– a well-established technology is being used in a radically new application;

– the organization has little in-house experience in implementing this technology in this application.

New technology/low maturity implies high uncertainty about future IT needs [2, p. 63].

As for Willcocks et al.'s commodity activities, those need to be performed, but are not sources of competitive advantage. In SOM, such activities can be true Commodities, wherein there is no strategic advantage (and perhaps strategic disadvantage) to performing the activity in-house, or the activity can be Basic meaning that it might or might not be performed in-house depending, among other reasons, on the capabilities of the firm in conducting that activity.

Furthermore, similar to SOM, Willcocks et al. discuss the firm's capabilities to perform an activity as an important consideration in determining the strategic approach for the firm to take. Consider their following statement:

A final factor relates to in-house technical capability. This factor is distinguishable from 'technological maturity' on two counts.

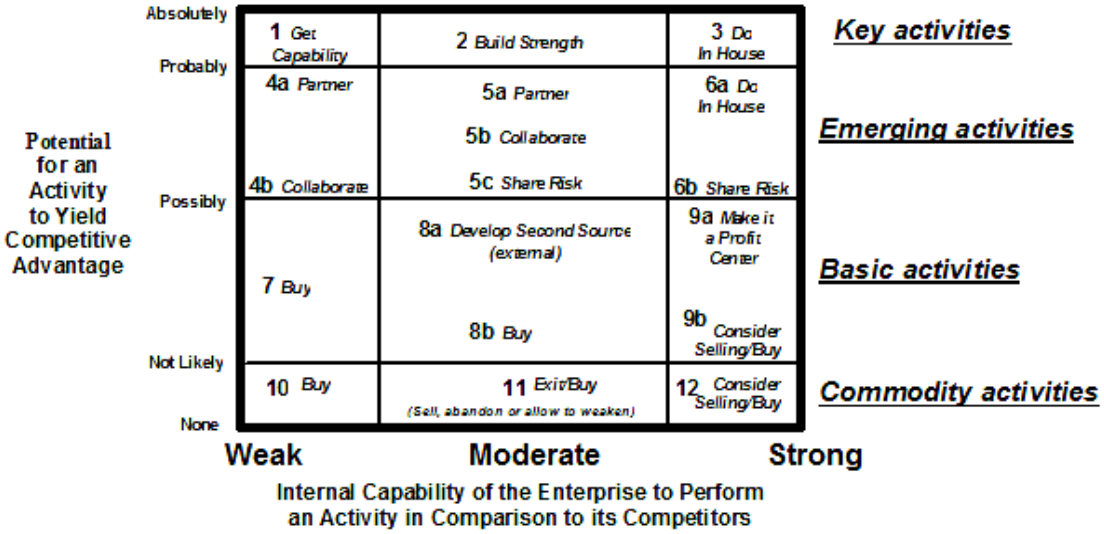

Figure 1

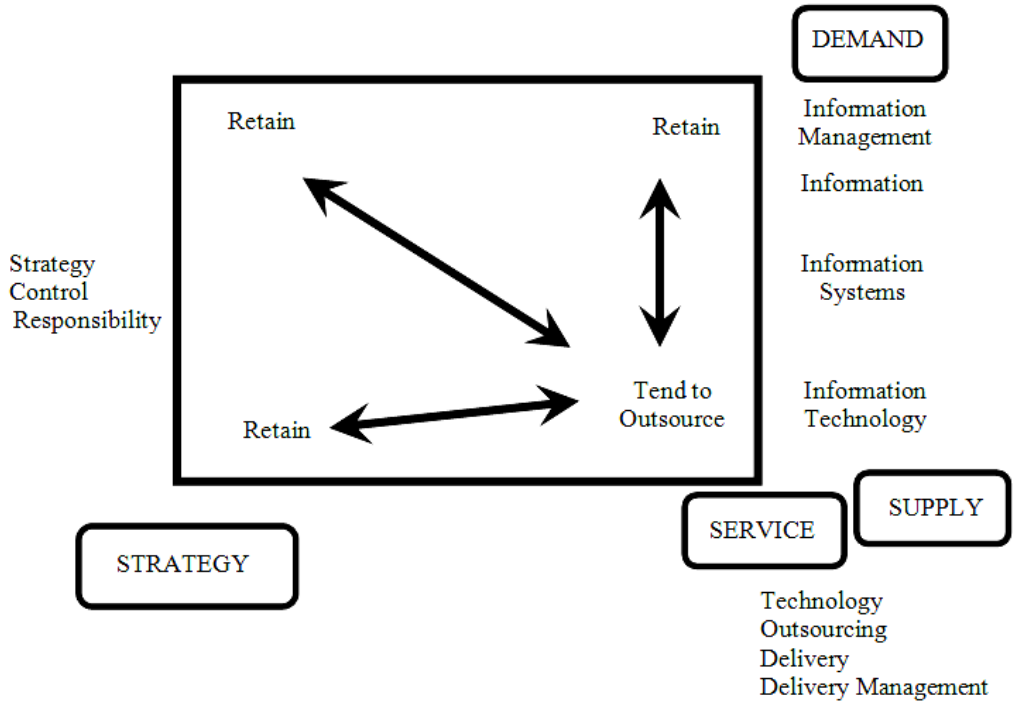

Figure 2

Firstly, it is the in-house capability relative to that available on the IT service market that is important, not just the level of in-house technical capability itself. Secondly, the cost of utilizing in-house capability, including opportunity costs, as compared to the price of using equivalent capacity from the external market is also an important factor [2, p. 64].

As with Willcocks et al., the second dimension that SOM considers, in addition to competitive advantage, is the strength of the in-house capability.

Finally, it should be stated clearly that SOM does not "force" organizations to make the recommended strategic choices that are identified in the SOM matrix. The purpose of the matrix is to make suggestions that must be evaluated and tested against reality. Similarly, Willcocks et al. state:

In this section we advance the decision-making process further by examining the trade-offs that organizations need to make on the critical variables in order achieve effective decisions. The decisions arrived at

then need to be tested against the 'Reality Check' outlined in the next section.

Our research helps us to identify what makes effective outsourcing decisions in 30 case histories [2, p. 64].

SOM also speaks of a "reality check" for its suggested strategic approaches and is an important step in the outsourcing decision process.

Discussion of the Case Histories. This paper will discuss a number of the case histories from the Willcocks et al. article and will relate their findings and recommendations to those that are found when applying the SOM matrix.

P. and O. European Ferries. The first case we consider is P. and O. European Ferries.

In P and 0 European Ferries the central reservation system processes up to 12,000 customer reservations a day. The system is not only integral to most of the company's operations. It also gives it a distinct, and possibly sustainable, competitive advantage over other ferry companies operating on the same routes. In this case the system is run in-house [2, p. 62].

Based on this information, we would place the central reservation system in the Key and Strong position of the SOM matrix (Position 3), and the recommendation is to Do In-house, the same as Willcocks et al.

BP Exploration and the Civil Aviation Authority. The second case is BP Exploration and the Civil Aviation Authority.

An activity is a commodity if its execution does not distinguish the firm from a competitor in business offering and performance terms. This type of activity needs to be done competently, but no more. At BP Exploration and Civil Aviation Authority, for example, the computerized financial accounting systems have been outsourced to Arthur Andersen, the accountancy firm and IT consultancy. In BP Exploration's case the 1991 £55 million four-year contract covers accounting services and transfer of 250 staff, as well as related computer systems [2, p. 62].

Civil Aviation Authority outsourced their accounting systems to Arthur Andersen in the early 1990s on a contract to 1995. The difference was that, in the market testing phase, the vendor was chosen primarily for its greater expertise rather than on cost saving criteria as well [2, p. 65].

The information on BP's computerized financial accounting system is sketchy, but it might be reasonable to assume that it is of high quality, considering that BP is quite a strong firm. If that is the case, then the system would be placed in the Basic and Strong position of the SOM matrix (Position 9b) with the recommendation being to Consider Selling/Buying. That is what BP did.

As for the Civil Aviation Authority, the fact that the vendor was chosen for its greater expertise may place the Authority's capability rating in the Moderate category and thereby place it in the Basic and Moderate position of the SOM matrix (Position 8b) with the recommendation being to Consider Selling/Buying. By the way, "Selling" means selling the capability (or spinning it off) and then "Buying" it from the marketplace. In BP's case, they sold and then bought. In the Civil Aviation Authority's case, they bought and then redeployed in-house resources to higher value projects.

Willcocks et al. provide examples when outsourcing makes sense, even when in-house capabilities are strong.

High relative in-house capability will suggest keeping IT services in-house. However, one major UK retailer, for example, tends to redeploy in-house expertise on to developmental work and outsource what has been identified as 'low value' IT tasks, for example data processing. As at 1994, United Biscuits and ICI ran highly efficient data centres in-house, but constantly evaluated their costs against what is available from third party suppliers [2, p. 64].

Whether one classifies the data processing activities described for the "major UK retailer" or United Biscuits or ICI as Basic or Commodity in the SOM matrix, the recommended approach is to Consider Selling/Buying (Positions 9b or 12) when in-house capability is Strong.

W. H. Smith. Willcocks et al. next discuss the outsourcing of a commodity activity.

An illustrative case here is the outsourcing (to DEC) of telecommunications networks at W H Smith, the UK retail and distribution chain. A discrete technology and service identified as non-core was outsourced because a vendor could provide a similar or better service at lower cost. Future business uncertainty was adjudged low in this case as long as the contract was for three years, with an option to renew for a further two. Cost savings of between 20–30 % per annum have been achieved on this contract [2, p. 65].

In SOM, telecommunications networks (for a retailer) would be a Commodity service and from the information provided, W H Smith appeared to be Weak in this area based on the statement that a vendor could provide better service at lower cost. As a result, this activity for W H Smith would be placed in the Commodity and Weak position of the SOM matrix (Position 10) where the recommendation is to Buy, which is what W H Smith did.

North West Thames Regional Health Authority. Willcocks et al. move on to deal with what they call "Mixed Case" Scenarios.

Organizations that are successful in applying an 'incremental' approach to outsourcing invariably are found to have applied the criteria detailed above to their early contracts. However, when looking across the portfolio of IT/IS applications, activities and services that an organization has, it is unlikely that circumstances for many of the items will be so clear cut in their pointers for decision-making as those outlined in our first two scenarios. In practice we have found most organizations taking a selective approach to outsourcing. North West Thames Regional Health Authority has been a successful practitioner of selective outsourcing. Here mainframes and data centres were outsourced, together with IT staff, to Sema Group in April 1991. The staff had high experience with the relevant technology, a fairly short term (5 year) contract was signed to minimize risk but

also because the systems had limited usefulness beyond 1995, and the outsourced assets, including staff, were considered 'non-core'. Outsourcing also offered prospective cost savings. Essentially NW Thames were not outsourcing a problem here, and this is a typical pattern amongst the more successful contracts we have studied [2, p. 65–66].

In SOM, the activities that NW Thames outsourced were considered by the firm to be Basic, and the staff had high experience, which would imply a Strong capability. In this case, the activity would be placed in Position 9b of the SOM matrix, and the recommendation would be to consider Selling/Buying, which is what they did.

The North West Thames Regional Health Authority case had some other aspects. Certain other items were outsourced separately on *ad hoc* contracts. One of these was applications development. Here, though in-house technology maturity was low, it was felt that no great specialist skills or NHS knowledge was required by the vendor because the policy was to move to packages already available rather than commission new development work…. The development of a Wide Area Network for the RHA, however, was seen as a strategic project involving highly interconnected systems and potentially touching many users within the Health Authority. It was retained in-house, the aim being to build up in-house skills on this technology. A 'Buy-In' (or 'insourcing') strategy was pursued here. To balance the outsourcing, further elements identified as 'core' were retained in-house. These included IT/IS planning, liaison, training and consultancy and ability to manage the outsourcing contracts. Where these were inadequately resourced a strategy of 'insourcing' IT capability, basically recruiting experienced staff, was adopted [2, p. 66].

There are three separate activities discussed in the preceding paragraph. The first is the outsourcing of applications development, the second is the development of a wide area network, and the third involves the management functions needed to work in an outsourcing/in-sourcing environment. For the applications development described, it appears that the applications were already available in the marketplace, so most likely this activity would be categorized as a Commodity in the SOM. Since it is stated that in-house technology maturity was low, it appears that NW Thames was Weak in this area. According to SOM, this activity would be placed in Position 10 of the matrix, and the recommendation would be to Buy, which is what NW Thames did.

As for the second activity – the development of a wide area network for the RHA – the Authority viewed this activity to be a provider of competitive advantage i. e., what they called a "strategic project"). That would place it in the Key category. Furthermore, we learn that the in-house capabilities needed to be built up in order to perform this activity, so the initial capabilities were Moderate or Weak. The SOM matrix would place this activity in Position 1 or 2, and the recommendations would be to Get Capability or Build Strength, respectively. That appears to be what NW Thames did, as it is stated that they recruited experienced staff for this activity.

Finally, the third activity – the management functions needed to work in an outsourcing/in-sourcing environment, which they describe as including IT/IS planning, liaison, training and consultancy, and ability to manage the outsourcing contracts – the most likely position is Key according to SOM, since the Authority was highly dependent on IT/IS and, since some of the IT/IS would be outsourced and some in-sourced, its management would be highly important to the organization. From the brief description, it appears that the capability would be classified as Moderate, and NW Thames hired personnel to fill in gaps in their capability. Placing this activity in the Key and Moderate position on the SOM matrix (Position 2), the recommendation is to Build Capability, which they did.

Pilkington. Willcocks et al. discuss the Pilkington case next.

Pilkington, the UK-based glass manufacturer, provide an illustration of selective outsourcing within Pilkington as a whole (manufacturing systems were left largely under in-house IT staff) but almost total outsourcing at Pilkington Head Office. The situation in 1991/2 was one of considerable business and organizational change, devolution of the business, and the head office being slimmed down. Head Office IT was outsourced to EDS. The items outsourced consisted firstly of the ageing data centre mainframes and most of the IT staff, including the IT manager, who became the vendor's account manager. This was seen as a positive move, guaranteeing continuity and minimizing the risk. Pilkington knew who they were dealing with and also had guarantees that transferred staff would stay working on this contract.

More unusually, as part of the deal, Pilkington also outsourced applications development of new office and network systems. Pilkington were low on skills here. We have found that generally the more effective arrangement in these circumstances for development work is to use a 'Buy-In' approach. This is certainly the case in Quest International, for example, where in several 1990s contracts vendors were seen as team members who help to build up in-house development capability. Pilkington looked to the vendor to provide additional skill/expertise through training transferred staff, and bringing new staff on to the contract… This outsourcing approach has proved successful because of action taken to minimize its risks. Pilkington knew the vendor staff and account manager-the relationship side was fairly secure and guaranteed some flexibility. Secondly there was a short term contract. Thirdly, Pilkington made sure it would own the assets being developed. Fourthly, Pilkington retained in-house capability to manage the contract. More broadly, Pilkington identified as 'core', and retained, their ability to manage strategy, contracts and business knowledge, together with a pool of technical skill needed to control the overall architecture of the company [2, p. 66].

The comment about keeping manufacturing systems largely in-house reflects the view that these are Key

activities, which the SOM matrix recommends should be done in-house. As for outsourcing Pilkington's Head Office IT, we can conclude that the IT activities at the Head Office were mainly basic and, from the description provided, the IT capabilities of the Head Office were Weak, most notably in the data center mainframes, or Moderate when speaking about the IT staff. By transferring the IT manager and staff to EDS, Pilkington enabled them to be in a stronger environment. Considering SOM, the Head Office IT activity would be placed in the Basic and Weak or Moderate categories (Positions 7, 8a or 8b), and the recommendation would be to Buy the activity (Positions 7 or 8b), or to Develop a Second Source (Position 8a), which is what Pilkington did.

In terms of application developed, it created a second source by transferring most of its IT people to EDS and then buying back their services. But note that Pilkington kept a pool of technical talent to manage and control the overall architecture and also Pilkington made sure that it would own the assets being developed, indicating that some of these assets, at least, were perceived to be Possibly Sources of Competitive Advantage (referring to the SOM matrix), which is why Position 8a seems more appropriate to this situation.

NV Philips. The next case involves NV Philips. Willcocks et al. state that this case demonstrates the concept of a "Total Outsourcing" decision and discuss the true manifestation of such a concept.

When talking about effective decisions, in several ways the phrase 'total outsourcing' must be a misnomer. Generally speaking in effective 'total' outsourcing contracts 'strategic differentiators' would not be outsourced; 'strategic commodities' might well be. Of course there can be mistakes in definition, but generally speaking companies will recognize most of IT/IS as 'non-core' before they decide on the 'total outsourcing' route. However, case study evidence from Huberg and Lacity and Hirschheim support our own findings that where all IT/IS is deemed 'noncore' and outsourced, there always have to be certain IT/IS capabilities left in-house.

This was recognized at NV Philips, the electronics manufacturer. From the mid-1980s the company consolidated and rationalized its IT capability. Business exigencies required shedding of labour and non-core activities. As a prelude to total outsourcing Philips pulled out of its in-house IT department some 100 business systems analysts and put them back into the businesses that made up the company. This meant that each business had its own IT capability on the demand side. Philips then outsourced all its software and systems development, including 180 related staff, through forming a separate partly owned company in a joint venture with a Dutch software house. Philips also outsourced all its communications and processing capability, including some 140 staff, through setting up another partly-owned company that could sell its service on the open market.

…Philips have outsourced IT supply but have retained in-house capability to define business demand. Also there is a central management capability to define strategy, identify and coordinate IT/IS needs across the Group, provide internal consultancy and manage contracts. The risks of total outsourcing are also ameliorated by the 'vendors' being partly owned and highly dependent on business from Philips. Also there are strong pre-existing mutual relationships and business knowledge held by client and vendors [2, p. 66–67].

The NV Philips case gives a clear example of the situation where a company has Strong capability in a Basic area. This situation is classified as Basic on the assumption that the activities were business processes rather than technical activities. According to the SOM matrix, those activities could be placed in Positions 9a (Make it a Profit Center) or 9b (Consider Selling/Buying). In setting up one company in a joint venture with a Dutch software house for all its software and systems development, NV Philips was Selling / Buying in accordance with Position 9b. In setting up a second, partly-owned company for all of its communications and processing capability that could sell its service on the open market, it was Making a Profit Center in accordance with Position 9a. Once again, we find that the company retained internal expertise in order to effectively manage its internal needs (Key) within an outsourcing environment.

The concepts and case studies of the Willcocks et al. article provide further support for the Strategic Outsourcing Model. The difference between the model put forward by Willcocks et al. and the SOM is that the Willcocks et al. model is very situational, i.e., if this situation, then that action.

The SOM provides a clearer theoretical basis for making outsourcing decisions by focusing the decision maker's attention on two factors – contribution to competitive advantage and strength of the organization's capabilities. Using those two factors, the decision maker can locate a position on a matrix where a suggested strategic approach is found. Those suggested approaches can bring to mind some areas for consideration, but always require a "reality check" prior to taking actions.

The Strategic Outsourcing Model was developed by and validated on the experiences of management decision makers, so it comes as no surprise that the decisions demonstrated in the Willcocks et al. article are consistent with the model. However, as with all theories and models, there is a need to continually test them against real-world data. As such, the Willcocks et al. article is a valuable resource.

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СТРАТЕГИЧЕСКИЕ РЕШЕНИЯ, ОБЕСПЕЧИВАЮЩИЕ СОЗДАНИЕ ИНФОРМАЦИОННОЙ ТЕХНОЛОГИИ

В статье приводится стратегическое решение, обеспечивающее создание информационной технологии (ИТ), рассматривается стратегическая модель аутсорсинга и предпосылки для принятия стратегических решений.

Ключевые слова: стратегическая модель аутсорсинга, стратегия, матрица, принятие эффективных решений сорсинга, ключевые действия, появляющиеся действия, основные виды деятельности.

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ПРИНЦИПЫ ФОРМИРОВАНИЯ СТРАТЕГИИ РАЗВИТИЯ СОЦИАЛЬНОЙ ИНФРАСТРУКТУРЫ

Рассматриваются принципы формирования стратегии социальной инфраструктуры. Вводятся дополнительные принципы, учитывающие особенности социальных инвестиций. Конкретизировано содержание предложенных принципов с учетом выявленных особенностей развития социальных отраслей на современном этапе, а также форм их проявления.

Ключевые слова: принципы инвестирования, социальная инфраструктура, оценка эффективности инвестиций, критерий оценки эффективности, инвестирование в социальную инфраструктуру, распределение ограниченных бюджетных средств.

В начале 90-х гг. XX в. произошли события, полностью изменившие существующую ранее систему, как политическую, так и экономическую. Рыночная система хозяйствования, зародившаяся в России в результате происходящих перемен, создала абсолютно новые условия для жизни людей: государственная собственность сменилась частной, государственное планирование экономики сменил рынок, тотальный государственный контроль был заменен предпринимательской способностью. Новая экономическая система задала свой вектор дальнейшего развития страны, определив свои правила и принципы, регламентирующие хозяйственную деятельность субъектов и формирующие определенные нормы к экономическим сферам жизнедеятельности людей. Сложившаяся экономическая формация, современное состояние социальной сферы, обусловленное переходом к рыночным отношениям, и связанные с этим закономерности и тенденции развития социальной инфраструктуры требуют пересмотра принципов оценки эффективности социальных инвестиций.

Изучение принципов формирования стратегии социальной инфраструктуры проводилось на основе анализа современных научных представлений об оценке эффективности инвестиций. Изучение их содержания, безусловно, представляет теоретический и практический интерес, однако не может быть исчерпывающим с точки зрения формирования принципов выбора стратегии развития социальной инфраструктуры в современных условиях.

Сформулированные различными авторами принципы формирования стратегии социального развития учитываются при принятии управленческих решений в отношении эффективного распределения ограниченных бюджетных средств. Однако современные условия требуют их детализации и уточнения с учетом существующих особенностей и закономерностей развития социальной инфраструктуры.

Анализ существующей литературы позволил выделить основные принципы формирования стратегии социальных отраслей. Рассмотрим состав предложенных принципов, а также их содержание.

1. Равенство субъектов региона в определении потребности населения муниципальных образований в объектах социальной сферы – заключается в необходимости равноправного распределения объектов социальной сферы между населением различных территорий.

2. Эффективность использования средств краевого бюджета, предусматривающая достижение нормативной обеспеченности объектами социальной сферы при минимальных объемах вложений бюджетных средств, – заключается в оптимальном распределении выделяемых средств регионального бюджета для решения задач выравнивания и/или доведения до нормативного уровня обеспеченности объектов социальной сферы.

3. Достоверность исходных данных и прозрачности процедуры определения потребности и объемов капитальных вложений в объекты социальной сферы