

“The Commons” Play an Important Role in the “Endogenous Development” of a Mountain Village

A Local Production for Local Consumption and a Beautiful Townscape in Kaneyama-town, Yamagata Prefecture

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Abstract

Western-style monophyletically extrinsic economic development, that has been a model for Japan and South Korea, is leading to a deterioration of the global environment and depletion of resources. Nations and communities are being forced into a situation where they will have to pursue “independent, polyphyletic endogenous economic development”. In Kaneyama-town, local production for local consumption of “Kaneyama-type houses” which are built with local resources (Kaneyama cedar) using local techniques (Kaneyama carpentry) is bringing about “endogenous development”. The purpose of this report is to examine what is spurring this development. In order to understand residents’ thoughts about “Kaneyama-type houses”, we sent questionnaires to them. As a result, we learned that local residents who share the “common idea” of preserving and nurturing their beautiful townscape (the local commons), order “Kaneyama-type houses” from Kaneyama carpenters and “endogenous development” is achieved by Kaneyama carpenters linking home construction with local use of Kaneyama cedar materials produced at local sawmills. The key to sustainable “endogenous development”, that is, whether or not this pursuit of “endogenous development” will continue, depends on whether or not the local residents will continue to share the “common idea” of preserving and nurturing their beautiful townscape (the local commons).

Disciplines: Forestry and forest products

Additional key words: local commons, local residents, local resources

Issues with mountain villages

In order to maintain the vitality of mountain villages, the Japanese government implemented the “Mountain Village Development Act” in 1965 to set targets and formulate plans for mountain village development. Based on this plan, local industrial and social infrastructures, such as road, water and sewer facilities, have been improved. However, mountain villages are still suffering from population reduction and aging. Moreover, local agriculture and forestry have fallen into a depressed state due to globalization, and new measures for attracting new industries have been mostly unsuccessful. Cohort analysis of mountain villages using population census data of the Ministry of Internal Af-

fairs and Communications indicates that the total population of mountain villages, which was 7,645,000 in 1960, decreased to 4,546,000 in 2000 and will decrease to 3,684,000 by 2020.

Mountain villages suffer from the depression of industries such as agriculture and forestry, a lack of public facilities for daily living and a fragile social organization. As a result, many communities are on the verge of collapse. Failure to bring in capital, raw materials and technologies effectively from the outside to create and sell products is doing little to revitalize these communities due to the outflow of their labor force. In addition, the sources of raw materials and customers for finished products are too distant for goods and materials to be shipped in economically feasible ways.

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Around the world, many developing countries are pursuing the same type of Western economic development that countries such as Japan and South Korea have achieved, and the countries which have achieved economic development are beginning a scramble for resources. If every country on the globe pursues Western-style monophyletically extrinsic economic development, it will exacerbate the deterioration of the global environment and depletion of resources. Nations and communities are being forced into a situation where they will have to pursue “independent, polyphyletic endogenous economic development”⁸.

In 1975, at the Seventh Special Session of the United Nations General Assembly, the Dag Hammarskjöld Foundation, in a report titled “What Now?”, proposed two new types of approaches to development: “endogenous development”, and self-reliance. According to the report, “If the development is the development of man, as an individual and as a social being, aiming at his liberation and at his fulfillment, it cannot but stem from the inner core of each society”⁷. In “Factors involved in the formation of a self-sufficient system for timber products in Kaneyama-town”, Okuda (citation) stated that in order to connect house building and professional use of local Kaneyama cedar in the town, a “building network for Kaneyama-type houses”, which includes residents, Kaneyama carpenters, sawmills, and forest owners, should be established that will enable local production for local consumption; in other words, “Kaneyama-type houses” should be built with local resources (Kaneyama cedar) using local techniques (Kaneyama carpentry)⁵.

The purpose of this report is to examine how this local production for local consumption is bringing about “endogenous development”, and what is spurring this development.

Methodology

In order to understand residents’ thoughts about “Kaneyama-type houses”, we sent questionnaires to the heads of 1,617 households of Kaneyama-town in September 2002. There were 453 respondents, or about 28% of the households. We also conducted interviews with 12 Kaneyama carpenters, three construction companies and two lumber companies about the wood business in August 2003 and November 2004. In order to gain a better understanding of their “appraisal of the townscape”, we sent questionnaires to the heads of 1,631 households in October 2008. There were 447 respondents, or about 27% of the households. Previously, in August 2002, the town of Kaneyama had conducted a

survey to learn about the state and distribution of Kaneyama-type houses. However, to gain a more thorough understanding of this situation, in January 2007 we conducted a survey of all Kaneyama-type houses in the town.

Description of the study area

Kaneyama-town is an old post town located on the old Ushuu Way, which was a road connecting Fukushima Prefecture and Aomori Prefecture mainly in the Edo period. The walls of Kaneyama houses are made of white earth. The upper parts of the outer walls of the Kaneyama houses are also made of white earth, while the lower parts are made of Kaneyama cedar, and the roofs are gabled. The houses blend in harmoniously with the greenery of the mountains, helping to create an atmosphere of serenity in the town.

This townscape is the result of “town beautification campaigns” which have been undertaken since 1963. These campaigns started after then-mayor Eiichi Kishi had visited European and American communities and decided to create a townscape for Kaneyama that would blend in better with the natural environment and culture in a manner appropriate for it. Furthermore, in 1984 the Kaneyama municipal government implemented the “New Kaneyama Basic Design”, and launched the ambitious “100-year Movement for Creating a Beautiful Townscape”. Two years later, the regulations to form a beautiful townscape were put in place to make residents aware that the townscape is the precious heritage of everyone in Kaneyama and houses should blend in better with the natural environment, better reflecting the local culture.

According to the regulations, which do not impose penalties, when someone builds or repairs a house in Kaneyama-town, they should follow the guidelines that are stipulated in the “Townscape Formation Standards”. If the style of a house meets the standards, it is called a “Kaneyama-type house” and a grant-in-aid is provided to cover 1/3 of the building or repairing expenses up to a maximum of 500,000 yen. In the standards, the row houses that have long existed in the downtown area, and the farmhouses built on spacious lots away from the roads, form the basis of the images of “Kaneyama-type houses”; that is, they have supporting columns that extend to the outside, bottom sections that are protected by long, white boards that are attached contiguously, and gabled roofs.

Table 1. Kaneyama residents’ evaluations of “Kaneyama-type houses”

	Kaneyama-type house	Other wooden house	Non-wooden house	Total	
What type of house do you want to live in?	215 (82%)	40 (15%)	6 (2%)	261 (100%)	
	Kaneyama cedar lumber	Other domestic lumber	Any lumber	No reply	Total
What material do you want to build a “Kaneyama-type house” of?	182 (85%)	20 (9%)	12 (6%)	1 (0%)	215 (100%)
	Yes, satisfied	No, dissatisfied	Neither	No reply	Total
Are you satisfied with your Kaneyama-type house?	161 (68%)	30 (13%)	40 (17%)	6 (3%)	237 (100%)
	Suitable	Traditional	Highly ranked	Popular	Total
What is your image of a typical Kaneyama-type house?	319 (70%)	195 (43%)	73 (16%)	105 (23%)	453 (100%)

Source: Questionnaire findings (September 2002)

Findings

The evaluation of “Kaneyama-type houses” by Kaneyama residents

According to the results of the September 2002 questionnaire, of the 453 respondents, 432, or 95%, knew about the regulations for making a beautiful Kaneyama townscape. The 97 “Kaneyama-type houses” which were built or repaired in the 2005 fiscal year, received a grant-in-aid. Since fiscal 1986, a total of 1,085 “Kaneyama-type houses” have received a total of 188 million yen in grants-in-aid, and this figure is increasing steadily. In 2001, 86% of all new houses received a grant-in-aid. Although this figure fell to 69% in 2002, during the next 3 years 100% of all new houses had received a grant-in-aid. According to the survey administered in 2002, the proportion of Kaneyama-type houses to all houses in the town was 52%; our on-site survey results indicated that this figure had increased to 60% by 2007.

Moreover, 215 of the 261 respondents, or 82%, who wanted to rebuild a house wanted to live in a “Kaneyama-type house”, and 182 (85%) of the 215 respondents wanted to build a “Kaneyama-type house” of Kaneyama cedar. Furthermore, 161 of the 237 respondents, or 68%, who stated they lived in a “Kaneyama-type house” expressed satisfaction with their homes, while only 88 of the 216 respondents (41%) living in other types of dwellings expressed satisfaction with them. Thus, the satisfaction rate of residents of “Kaneyama-type houses” was high compared with those who lived in other houses. Moreover, 319 respondents, or 70% of all respondents, believed that “Kaneyama-type houses” were suitable for them (Table 1)⁵.

Flow structure of Kaneyama cedar lumber

Based on the results of the interviews in August 2003 and November 2004, the flow of locally-produced lumber in Kaneyama-town in fiscal 2002 indicated that the floor area per house is about 200 square meters and 0.25 cubic meter of lumber is used per square meter of floor space. In total, about 1,500 cubic meters of lumber have been used for building 30 houses in the town. Approximately 44,900 cubic meters of Kaneyama cedar logs were produced in the town, of which 9,800 cubic meters were supplied as building materials for local use, with the remainder being shipped out of the town. Lumber mills in the town processed the logs into 5,900 cubic meters of Kaneyama lumber, of which 2,000 cubic meters were used locally. Even if this local lumber were used in all home construction in Kaneyama, there would still be 500 cubic meters that was still unused. As a result, it appears that nearly all building members that can be made from Kaneyama lumber are local products, and that houses are built using local Kaneyama cedar lumber (Fig. 1).

Forming a “building network for Kaneyama-type houses”

Based on the results of the interviews in August 2003 and November 2004, Kaneyama carpenters were all recommending “Kaneyama-type houses” for their customers, and were trying to use locally-produced Kaneyama cedar lumber as a building material. Based on their advice, their customers usually decided to order “Kaneyama-type houses”. Kaneyama carpenters who receive orders from townspeople order a set of lumber required for building these houses from a manufacturer or

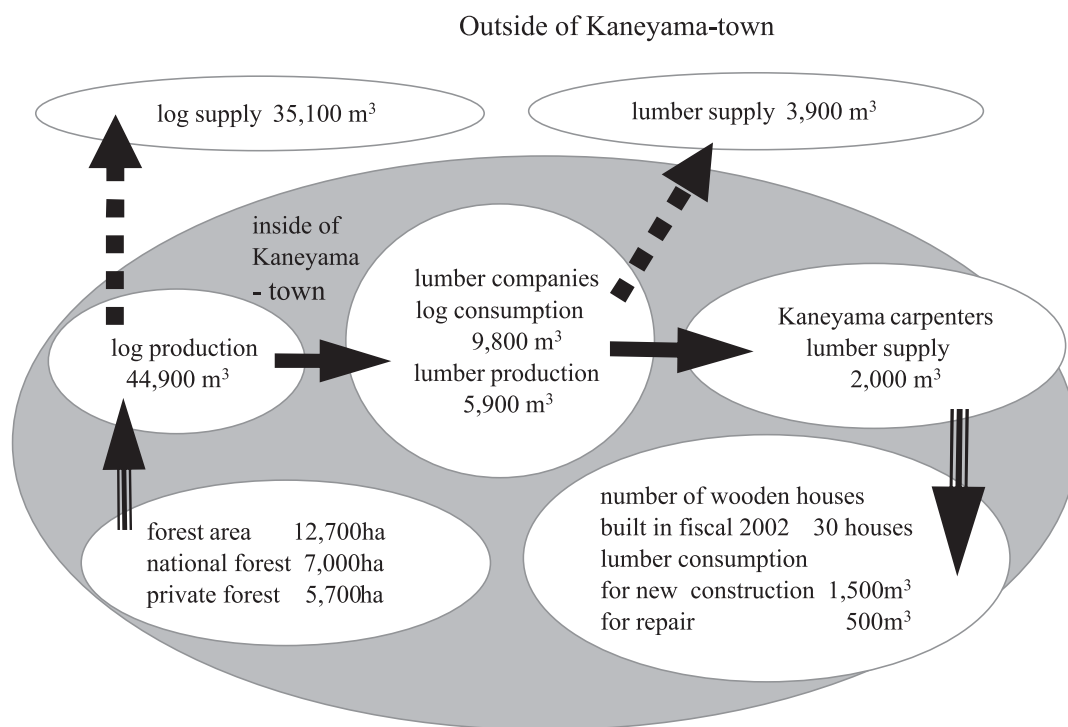


Fig. 1. Flow structure of Kaneyama cedar lumber (Fiscal 2002)
Source: Questionnaire findings (August 2003 & November 2004)

forestry association in the town. For their part, local forest owners are being asked to provide a stable supply of Kaneyama cedar materials, and are focusing on large-scale production from trees that are 80 or more years old whose wood is strong and easy to process.

Looking at plantation forests in Kaneyama in terms of age and area, there is no difference with the national figures of a peak age of between 31 and 40 years. However, in contrast to the national proportion of 4.4% of total forested area consisting of trees 10 years or younger, in Kaneyama the figure is 8.3%. Moreover, the national proportion of afforested area occupied by trees 51 years or older is 8.6%, but in Kaneyama that figure is 37.6%. Thus, Kaneyama's plantation forests have a greater proportion of both younger and older trees. This age structure provides Kaneyama carpenters with a steady supply of various Kaneyama cedar products from construction materials to structural materials that are processed by local sawmills (Fig. 2). In order to connect house building to creating a beautiful townscape and professional use of local Kaneyama cedar in the town, a "building network for Kaneyama-type houses" which includes residents, Kaneyama carpenters, sawmills, and forest owners was formed⁵. Kaneyama carpenters have acted to provide a link between sawmills, and forest owners on the one hand, and residents on the other (Fig. 3).

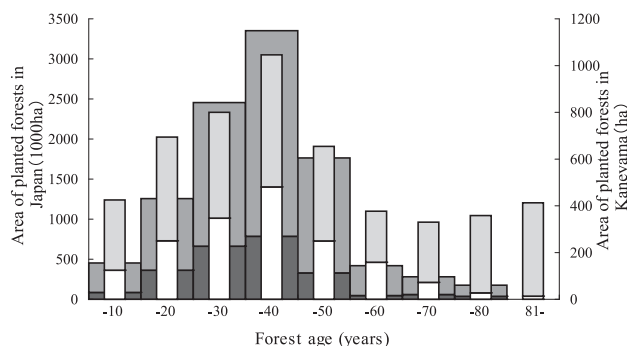


Fig. 2. Area of planted forests in Japan and Kaneyama
Source: Census of Agriculture and Forestry 2000
■: Private forests in Japan,
■: National forests in Japan,
■: Private forests in Kaneyama,
□: National forests in Kaneyama.

Yamamoto analyzed the economic structure of Kaneyama using a tool called an inter-industry-relations table. According to the "index of power of dispersion", the four industries of log production, lumber/plywood and chip manufacturing, home construction and non-timber forest production were in the top 15 of the 187 industries considered to have an effect on the economy of a town. Furthermore, the two industries of forestry, and lumber/plywood and chip manufacturing were

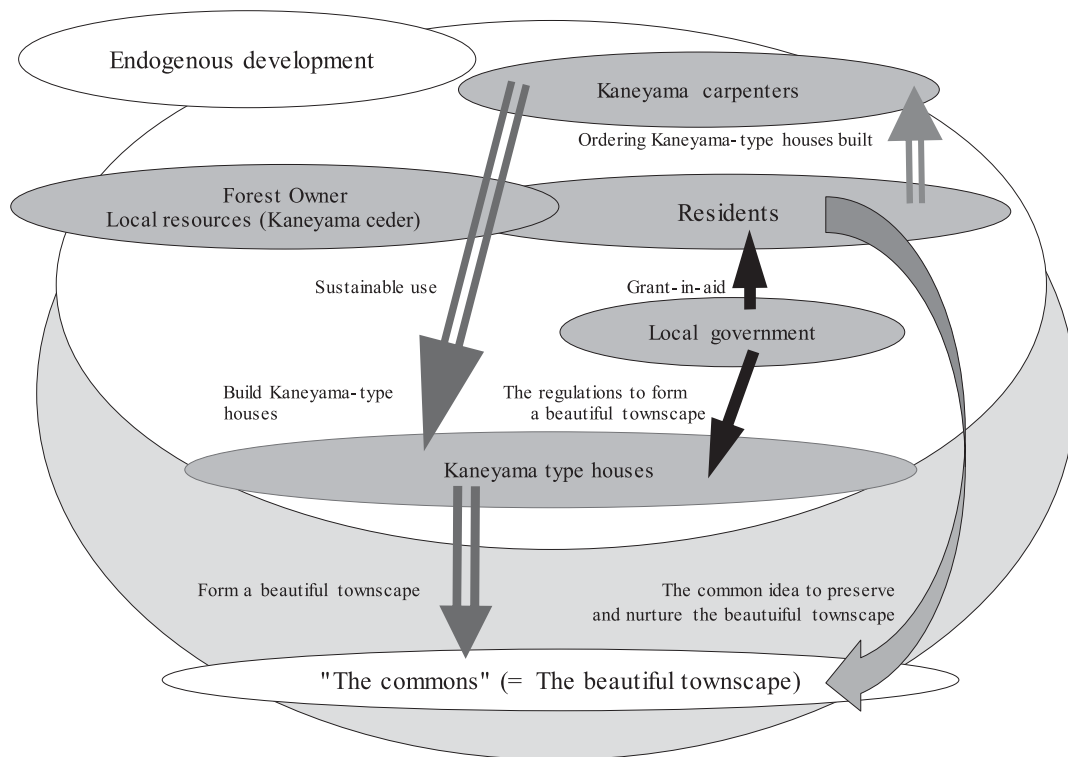


Fig. 3. Factors to induce the Endogenous development of Kaneyama-town

among the top 15 industries of the “index of sensitivity of dispersion”, that is, they are strongly affected by the local economy. Yamamoto noted that through his analysis he was able to gain an insight into the importance of wood-related industries in Kaneyama (Table 2)¹⁰. Thus, this system is supporting the livelihoods and economy of the local area.

The evaluation of a townscape by Kaneyama residents

According to the results of the October 2008 questionnaire, 27% of respondents considered their townscape to be “excellent” and 43% rated it as “good”, for a 70% favorable rating. In addition, 52% of respondents wanted to make a concerted effort to form the overall townscape, that everything, including mountains and fields, should be considered in future. When combined with the 38% who wanted to make a concerted effort to continue with its current focus on residential areas, we can see that 90% of the respondents would like to continue to make a concerted effort toward townscape development (Table 3). It appears that most of the local residents have a high regard for the unique townscape of Kaneyama-type houses, and they would like to build “Kaneyama-type houses” that are in harmony with both the townscape and the natural environment.

Discussion and conclusion

“Endogenous development” in Kaneyama-town

In the “Deployment of the Endogenous Development Theory”, Tsurumi stated that the processes and life-styles which result in the achievement of common goals of people in an area are automatically created by those people using local resources such as water, wood and minerals. At the same time, they are automatically created by new technologies in which traditional techniques are integrated with outside knowledge, technology and systems in accordance with the particular natural environment, cultural heritage and history of the area. This process of social change by which the goal is achieved is “endogenous development”⁸. According to this thought, the series of processes involving local production for local consumption in which Kaneyama carpenters build “Kaneyama-type houses” sustainably and effectively with local resources (Kaneyama cedar) using locally developed techniques is “endogenous development”.

A beautiful townscape and the local commons in Kaneyama-town

Recently, papers in the field of Environmental So-

Table 2. Index of power of dispersion and sensitivity of dispersion of industries in Kaneyama in the top 15 industries, 2000

No.	Industries	Index of power of dispersion	No.	Industries	Index of sensitivity of dispersion
1	Log production	1.57	1	Finance business	1.91
2	Stock farming	1.24	2	Transportation business (cargo)	1.79
3	Private transportation business (passenger)	1.24	3	Automobile repair business	1.79
4	Private transportation business (cargo)	1.23	4	Private transportation business (cargo)	1.54
5	Lumber, plywood and chip manufacturing	1.20	5	Private transportation business (passenger)	1.49
6	Water service business	1.20	6	Forestry enterprise	1.45
7	Office machine manufacturing	1.18	7	Retail trade	1.37
8	Electronic products manufacturing	1.17	8	Construction repair business	1.36
9	Furniture and equipment manufacturing	1.17	9	Water service business	1.36
10	Equipment for service industries	1.17	10	Metal-goods manufacturing	1.35
11	Housing construction	1.15	11	Real estate business	1.33
12	Grain production	1.15	12	Lumber, plywood and chip manufacturing	1.29
13	Non-timber forest production	1.15	13	Research and development in a company	1.26
14	Food processing	1.14	14	Government employee	1.17
15	Soft concrete	1.13	15	Waste processing business	1.12

Notes 1: Net credit refers to wood related industries.

Notes 2: Quotation from "5. Industrial Structure of Kaneyama-town. A self-sufficient system for timber products from Kaneyama cedar and a community and regional economy : A case study of Kaneyama-town, Yamagata Prefecture. Shinrin-Kagaku No.4 (2006.6). p51, Yamamoto Nobuyuki, Forestry and Forest Products Research Institute."

Table 3. Local residents' views of the Kaneyama townscape

	Excellent	Good	Average	Not good	No reply	Total
What do you think of Kaneyama's townscape?	120 (27%)	194 (43%)	108 (24%)	11 (3%)	14 (3%)	447 (100%)
	Form the overall townscape including mountains and fields	Continue with the current focus on residential areas	No special effort is necessary	No reply		
What kind of concerted effort do you want to make toward townscape development?	231 (52%)	171 (38%)	7 (2%)	38 (8%)		447 (100%)
	The municipal government	The community	Outside influences	No reply		
Who or what is the main player in forming Kaneyama's townscape?	204 (46%)	221 (49%)	17 (4%)	25 (6%)		447 (100%)

Source: Questionnaire findings (October 2008)

ciology have shown a growing interest in "the commons". These are not two-dimensional papers primarily focusing on public (government) versus private (companies and individuals), but rather studies that have begun

to use this as an opportunity to examine local resource management at the local resident level. This is due in part to renewed interest in "The tragedy of the commons" which the American biologist Garret Hardin² first

published in 1968. Using the pasturage of cattle in common grazing land as an example, Hardin maintains that common property resource management will fail.

In 1986, Blomley¹ convened the “Conference on Common Property Resource Management” in which case studies of both successful and unsuccessful management of common property were presented. At the conference, it was reported that “resource depletion will be unavoidable unless there is a thorough understanding of the systems, rules and customs that determine how common resources are managed”. Inoue³ defined resources that have to be shared by the people in the local community, for which regulations governing user rights and management are voluntarily established and maintained with “tight local commons” and expectations for their sustainable use and management. Tabeta⁶ wanted “the commons” to be considered as “the relationship between community spaces jointly managed by local residents and their utilization” which could also be said to be the “land spaces, including water in the community (streams, lakes, springs), forests and fields, beaches, and maritime areas, as well as the community’s ‘shared strength’ that includes labor force, services and trust that are part of the mutual cooperative system”. Such commons research targets have been expanding to include water, rivers, seas, traditions, and culture.

According to Yahagi⁹, common rules have been established for ‘forming and preserving beautiful scenery’ and ‘maintaining the sustainability of the commons’ based on a case against a proposed apartment house in which the Tokyo District Court ruled that ‘As a result of the continuous long-term mutual understandings and set of self-imposed rules of the local residents, the area around Daigaku Avenue in Kunitachi City is acknowledged to be very aesthetic, even by the general public, and a special townscape has formed. Even if just one of the residents pursues land use for his or her own profit by building a structure that strays from the established norm, then the integrally connected scenery will be de-

stroyed, and the right of the residents as a group to have an aesthetic townscape will be usurped’.

Based on the results of these discussions and our own findings, we can conclude that in Kaneyama, the unique townscape of Kaneyama-type houses is a common property resource that equals “the tight local commons”. However, since the residents themselves build “Kaneyama-type houses”, they have to follow “common ideas” for maintaining and forming the townscape which would otherwise deteriorate.

Structure of “endogenous development” and “the local commons”

In Kaneyama-town, in order to connect house building to creating a beautiful townscape and professional use of local Kaneyama cedar, a “building network for Kaneyama-type houses” was formed which includes residents, Kaneyama carpenters, sawmills, and forest owners. Moreover it appears that nearly all building members that can be made from Kaneyama lumber are local products, and houses are built using local Kaneyama cedar lumber. Thus, in Kaneyama-town, local production for local consumption in which “Kaneyama-type houses” are built with local resources (Kaneyama cedar) using local techniques (Kaneyama carpentry) is bringing about “endogenous development”. Local residents sharing the “common idea” of preserving and nurturing the beautiful townscape (the local commons), order “Kaneyama-type houses” from Kaneyama carpenters. Furthermore, Kaneyama carpenters connect house building to the creation of a beautiful townscape and professional use of local Kaneyama cedar in the town, to help stimulate this “endogenous development” in the town (Fig. 4). The key to sustainable “endogenous development”, that is, whether or not this pursuit (“endogenous development”) will continue, depends on whether or not the local residents will continue to share the “common idea” of preserving and nurturing their beautiful townscape, i.e. the local commons.

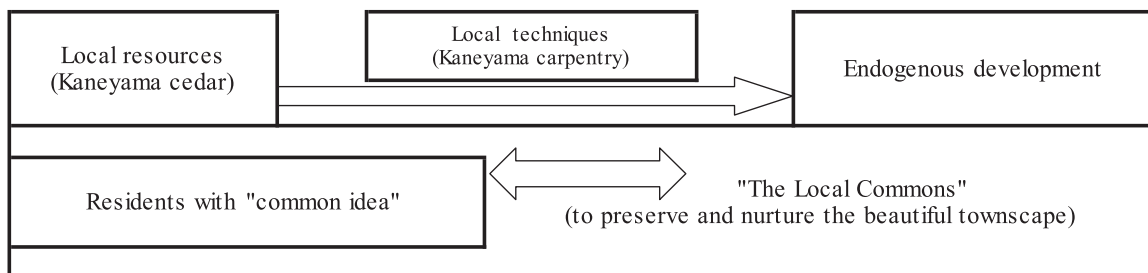


Fig. 4. Structure of “endogenous development” and “the local commons”

Problems remaining

According to the results of the questionnaire mailed to town residents in October 2008, 46% of respondents considered the municipal government to be the main player in forming Kaneyama's townscape, 49% believed the community was the main player, and 4% believed the townscape to be derived mainly from outside influences (Table 3). This image of "endogenous development" of Kaneyama-town, in which local government works with the community with some supportive involvement by "outsiders", may be an example of Inoue's vision of "collaborative governance", in which "outsiders" help in arranging a collaborative relationship among local authorities, residents and businesses⁴. However, this must be thoroughly investigated.

This report has examined the desire of local residents to preserve and nurture "the commons". In other areas as well, it is believed that local residents must have common thoughts and create conditions for addressing them subjectively. However, in order to determine whether or not the desire of local residents to preserve and nurture "the commons" is a universal requirement for "endogenous development", we must make comparisons with results of case studies conducted in other areas.

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