



Household Attributes and Socio-Economic Dynamics: A Case Study of Pathiar Village, Kangra Valley, Himachal Pradesh

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Abstract: This study examines the household characteristics and socio-economic patterns of Pathiar village, situated in the Kangra Valley of Nagrota Bagwan Tehsil, District Kangra, Himachal Pradesh. Nestled in the lap of nature, the village presents unique challenges and opportunities for its residents. The research explores the structure and design of dwellings, livelihood strategies, and the impact of geographical and climatic factors on household patterns. Key questions addressed include how people sustain their livelihoods despite limited landholding and whether environmental conditions influence settlement patterns. A field study was conducted using primary data collected through household surveys, interviews, informal discussions, and direct observations. Findings reveal that subsistence agriculture and livestock rearing form the backbone of the local economy, with a noticeable shift towards horticulture in recent years. The study also highlights a predominance of nuclear families over joint family structures and identifies critical gaps in social infrastructure, particularly in education and healthcare. This research contributes valuable insights into the socio-economic conditions of rural settlements in mountainous regions and provides a foundation for future studies aimed at improving living standards and sustainable development in the Himalayan context.

Keywords: Dwelling, Settlement, social infrastructure, occupation, Agriculture, Literacy.

Introduction

Himachal Pradesh, at the time of its formation in 1971, was a predominantly rural and economically underdeveloped region, characterized by limited infrastructure such as roads, electricity, housing, transport, banking, and markets. The state's mountainous terrain posed significant challenges to development. The socio-economic conditions in rural areas differ considerably from those in the plains, as well as from urban regions, where livelihood patterns vary. While rural populations primarily engage in subsistence agriculture, urban dwellers are more involved in non-agricultural activities. Agriculture remains a crucial pillar of economic development, not only providing food security but also serving as a primary source of employment and savings for rural households.

A majority of Himachal Pradesh's population resides in rural areas, relying heavily on natural resources for daily sustenance. In Pathiar village, agricultural activities dominate as the primary means of livelihood, with farming practices shaped by topography, soil conditions, and climate. The materials used in house construction in this region depend on factors such as climate, soil quality, and household income. The physical landscape plays a crucial role in determining rural settlement patterns, making the inhabitants highly dependent on their surrounding environment.

This study employs a socio-economic survey, a widely used research method in social sciences, to analyse the living conditions, household characteristics, and economic activities of the village. Surveys serve as a key tool for gathering data on household expenditure, income, housing conditions, and demographic patterns. Pathiar village has a literacy rate of 82.80%, with a Scheduled Caste population of 5.47%, which is lower than the district and state average. Approximately 57% of the population is engaged in various occupations, contributing to the village's workforce. This research aims to provide deeper insights into the socio-economic fabric of Pathiar village and highlight potential areas for sustainable rural development.

Objectives of the Study: The primary objectives of this study are as follows:

1. To examine the availability of basic amenities among households in the study area.
2. To analyse the demographic composition and occupational patterns of the village.
3. To assess the availability and condition of social infrastructure.
4. To assess the economic conditions of the community, including sources of income and patterns of livelihood.

Data Sources and Methodology: This study is based on a primary survey conducted through a door-to-door household-level assessment on December 20, 2021. Data were collected on key aspects, including demographic composition, occupational patterns, access to healthcare and education, household size, and dwelling structures. The base map of the study area was obtained from the local Patwari's office to aid in spatial analysis.

The research followed a systematic approach, incorporating various methodological steps for data collection, compilation, and analysis. Cartographic techniques were employed to map and interpret the collected data. Pathiar village, located in the Nagrota Bagwan Tehsil of Kangra district, Himachal Pradesh, was chosen as the study area due to its distinct rural characteristics.

To gain deeper insights, personal investigations, informal interviews with elderly residents, and field observations were conducted. A structured questionnaire was designed to collect relevant data, and researchers spent an entire day in the village administering the survey. Additionally, interviews were carried out with key informants, including the village Pradhan, senior residents, the Patwari's assistant, and local shopkeepers, to gather historical perspectives and understand socio-economic transitions over time.

A mixed-methods approach was adopted for this study, integrating both qualitative and quantitative research techniques. The qualitative aspect involved observational analysis and narrative accounts from villagers, while the quantitative component focused on statistical assessments derived from household data. This combined methodology ensures a comprehensive understanding of the socio-economic landscape of Pathiar village and provides a foundation for future research and rural development initiatives.

Location of Pathiar Village: Pathiar is a rural settlement situated in Nagrota Bagwan Tehsil of Kangra District, Himachal Pradesh, India. The village is located approximately 5 kilometers from the tehsil headquarters, Nagrota Bagwan, and 20 kilometers from the district headquarters, Kangra. It shares its boundaries with neighboring villages such as Hatwas, Dadh, Malan, and Chahri.

Geographically, the latitude and longitude coordinates of the nearby Tharu village are 32°12'9" N and 76°41'14" E, respectively. The altitude of Malan, another nearby village, is recorded at 870 meters above mean sea level. These geographical factors contribute to the climatic and environmental conditions of Pathiar.

The climate of Pathiar is characterized by seasonal variations, with hot and humid summers and cold, dry winters. The average summer temperature is around 28°C, while the winter temperature drops to approximately 9°C. The annual average temperature remains around 21.8°C. The village

receives an average annual precipitation of 1,578 mm, which influences its agricultural activities and vegetation.

The natural vegetation of Pathiar is determined by its altitude and rainfall patterns. Common tree species found in the region include Mulberry, Bamboo, Siris, and Beul. The village is surrounded by Nagrota Bagwan Tehsil to the southwest, Palampur Tehsil to the east, Kangra Tehsil to the west, and Dharamshala Tehsil to the north. Major cities near Pathiar include Dharamshala, Hamirpur, Chamba, and Dalhousie.

The local language spoken in Pathiar is Pahari, reflecting the cultural heritage of the region. The total population of the village is approximately 4,470, with agriculture and allied activities being the primary sources of livelihood. This geographical and demographic profile provides a foundation for understanding the socio-economic dynamics of the village.

Review of Literature

A report by the Government of Himachal Pradesh (2001) highlights that agriculture serves as the backbone of the state's economy, with approximately 66.71% of the population depending on it for their livelihood. Given the region's hilly terrain, terraced farming is the predominant method of cultivation. The report further states that nearly four-fifths of agricultural holdings belong to small and marginal farmers. Due to the favourable climate, horticulture and vegetable farming—both seasonal and off-season—have seen significant growth over the past three decades, leading to a well-diversified agricultural economy. The findings reinforce the notion that Himachal Pradesh remains an agrarian state, with a majority of the rural population relying on agriculture for sustenance. Additionally, the state's economic growth rate has been recorded as higher than the national average.

Kumar (2012) conducted a study to assess the varying levels of socio-economic development in Himachal Pradesh during the 1990s. The research indicated that economic disparities widened in terms of industrial development and urbanization but showed a decline in relation to per capita income, the secondary sector's contribution to the district domestic product, and workforce participation. The study also identified significant variations in land use, particularly in permanent pastures and net sown areas, whereas other land categories remained relatively unchanged. Analysing cropping patterns in Solan district over time, the research found an increase in the area cultivated for wheat and paddy, while the cultivation of barley and maize significantly declined. Furthermore, a noticeable shift toward cash crops was observed, with farmers increasingly opting for commercial cultivation, including vegetables, fruits, and spices. This trend underscores a transition from subsistence farming to market-oriented agriculture in the region.

Interpretation and Analysis

Dwellings serve as a reflection of human adaptation to the physical environment, blending traditional practices with modern advancements. The surrounding landscape plays a crucial role in shaping settlement patterns, and this is evident in Pathiar village, located in the Kangra Valley of Himachal Pradesh. The present study examines household attributes and socio-economic conditions in the region.

Site and Situation of the Study Area

The site of a settlement refers to the land on which it is established, whether on a hillside, near a river, or in a plain area, while the situation describes its broader geographic context. The location of a settlement determines access to resources such as water, building materials, soil quality, climate conditions, and overall safety. Pathiar village is situated near the Pathankot-Mandi National Highway, which plays a vital role in connectivity. The settlement pattern in Pathiar is primarily compact and linear, with houses clustered together, although some dispersed houses are also present. The compact nature of the settlement is characteristic of rural Himalayan villages, ensuring proximity to essential resources and social interactions.

Types of Dwellings: The village comprises three main types of dwellings: Kuccha, Pucca, and Semi-Pucca houses. Data analysis indicates that over three-fourths of the houses in Pathiar are Pucca houses, while around one-fifth are Kuccha houses, and less than 5% are Semi-Pucca houses. The shift toward pucca houses can be attributed to rising incomes, better availability of construction materials, and improved road connectivity.

The timeline of construction suggests that most pucca houses were built after the year 2000, coinciding with economic diversification from agriculture to secondary and tertiary sectors. In contrast, many kuccha houses were constructed between 60 to 100 years ago. Historical records, such as the Latha Map from 1961-62, indicate that the village originally consisted solely of kuccha houses. The construction of roads has significantly contributed to the transition toward pucca and semi-pucca houses.

Construction Materials and Structural Design: The materials used for construction vary based on economic conditions and availability. The most commonly used materials include wood, stone, cement, metallic sheets, sand, bricks, clay, slats, shingles, and concrete. Most pucca houses have stone or brick walls coated with cement, with flooring materials such as stone, cement, mud, or timber. In contrast, kuccha houses have walls plastered with mud and cow dung. Semi-pucca houses, which are an intermediate category, typically use mud bricks with cement plaster. Wooden beams are commonly used in kuccha and semi-pucca houses to support the roofs. The flooring of kuccha houses is often finished with a mixture of mud, cow dung, and natural pigments for added durability.

Water for construction purposes is sourced from Baner Khad, a perennial stream flowing through the village, which serves as a crucial water supply. A micro-hydro power project on this stream also generates electricity for the local grid, providing sustainable energy to the village.

Roofing Patterns: The type of roofing used in houses depends on the availability of materials and economic status. The most common roofing materials in Pathiar are slates, sourced from the Dhauladhar Range, while some houses have concrete slab roofs. Slab roofs serve multiple purposes, such as drying agricultural produce and conducting household activities. Pucca houses in the village predominantly have concrete slab roofs, constructed with a combination of stone, cement, and iron rods.

Household Layout and Cultural Significance: Houses in Pathiar typically feature verandas and courtyards (Aangan), which play an integral role in daily life. The architectural design is undergoing modernization, with traditional styles gradually being replaced by contemporary structures. However, some houses still maintain three-story traditional designs, where the ground floor is used for livestock shelter, the middle floor serves as a living area, and the top floor is used for storing dry fodder during winter. Animal shelters, known locally as cowsheds, are constructed separately or attached to the houses. These structures are primarily made from mud, stone, and clay, with slate shingle roofs. The presence of animal shelters highlights the significance of livestock in the local economy.

Conclusion: The architectural landscape of Pathiar village reflects a transition from traditional rural dwellings to modernized housing structures. The availability of resources, economic growth, and infrastructural improvements have played a crucial role in shaping this transformation. The village's settlement pattern, construction materials, and house designs are heavily influenced by the natural environment, cultural traditions, and evolving socio-economic conditions. While modernization is evident, certain traditional elements, such as three-story houses and animal shelters, continue to be a part of the village's heritage.

Livelihood in the Study Area: Livelihood refers to how people in the region sustain their daily needs. The primary economic activity in these rural settlements is livestock rearing, including goats, sheep, cows, and buffaloes, which provide dairy products such as milk, paneer, and khoya (a condensed milk product used in sweets). Observations indicate a shift in household structures from traditional to modern, reflecting economic improvement. However, not all households have

benefited equally—some remain economically disadvantaged due to limited livestock, meeting only their basic needs.

Agriculture has traditionally been the primary occupation, but in recent years, occupational diversification has increased. Dairy farming remains a significant source of income, providing financial stability to many households. A notable shift observed during field visits is the transition from conventional farming to orchard cultivation, with some farmers planting plums and litchi, as the local climate supports their growth. This shift enhances profitability compared to traditional crops. Overall, livestock rearing, particularly sheep, goats, and dairy cattle, remains a vital source of livelihood, ensuring financial sustenance for the community.

Family Structure: Households in Pathiar village follow two predominant family structures: joint and nuclear families. A joint family consists of multiple generations living under the same roof, including grandparents, parents, and children. This structure fosters emotional bonds and provides financial and social support during challenges. In contrast, a nuclear family comprises only parents and their children, forming an independent unit distinct from extended family systems. Field studies indicate that nearly 65% of households in Pathiar village follow the joint family system, while the remaining 35% consist of nuclear families. This highlights the region's inclination towards traditional family values, although nuclear families are also becoming more common.

Family Size and Ownership: Family size serves as an essential indicator of societal structure, evolving. In Pathiar village, households are categorized into three groups based on the number of members: small (up to 4 members), medium (5-9 members), and large (above 10 members). The distribution of families reveals that 40% fall under the small category, 46% are medium-sized, and 14% belong to the large family category. Field observations indicate that Pathiar village follows a male-dominated societal structure, where ownership and control of land, livestock, and other assets rest primarily with men. Decision-making regarding agricultural activities, livestock management, and household affairs is predominantly undertaken by male members, reinforcing traditional patriarchal norms.

Basic amenities: Basic amenities play a crucial role in making life more convenient and comfortable. The government aims to provide essential infrastructure, including roads, water, and electricity, to improve the quality of life. These amenities encompass safe drinking water, sanitation, housing, road connectivity, electrification, fuel sources, and social services such as educational institutions and recreational facilities. Pathiar village has access to a 24-hour water supply, which is a fundamental necessity for daily activities like washing clothes, bathing, feeding animals, and cooking. The primary source of water in the village is the perennial Baner Khad, which originates from the snow-fed ranges of Dhauladhar. Water is supplied through taps installed outside houses, ensuring easy accessibility for the residents. Additionally, villagers rely on kuhals (small water channels) for agricultural purposes. Baner Khad provides an adequate water supply for both domestic and agricultural needs, even during the summer season. Apart from these sources, natural water bodies such as Baudis are also used for drinking water.

Regarding sanitation, Pathiar village has proper toilet facilities. Most houses have attached toilets within the main structure, while some have separate toilets outside. The village has a well-managed drainage system for kitchen wastewater, though the overall condition of the streets remains unsatisfactory. Wastewater from kitchens and toilets is often drained into kuhals and eventually flows into Baner Khad, impacting the surrounding environment. The village is surrounded by dense forests, which serve as a source of fodder and firewood for the residents. Many villagers, especially those from economically weaker sections, depend on firewood as their primary energy source. Those with better financial means utilize LPG (Liquefied Petroleum Gas) for cooking. Although LPG connections were distributed under the Pradhan Mantri Ujjwala Yojana in 2016, traditional fuel sources remain widely used due to the free availability of firewood. The use of kerosene in Pathiar village is minimal compared to firewood and LPG. Overall, while Pathiar village has access to essential amenities such as water, sanitation, and

energy, further improvements in waste management and infrastructure development could enhance the living conditions of its residents.

Literacy: The literacy rate in Pathiar village remains relatively low, with a noticeable gender gap in education. Female enrollment in schools is significantly lower than that of males, reflecting a male-dominated society. However, for higher education, students from Pathiar village travel to Nagrota, Palampur, and Dharamshala. The village has basic educational facilities, including an Aanganwadi, a primary school, and a Senior Secondary School. However, a shortage of teaching staff and inadequate infrastructure pose challenges to quality education. Despite this, students in the village have easy access to secondary education within the Pathiar panchayat, reducing the need for long-distance travel. Interestingly, parents in Pathiar village do not hesitate to send their daughters to distant institutions for higher education, indicating a growing awareness of the importance of education for girls. Additionally, during field visits, it was observed that there were no school dropouts among children aged 5 to 18 due to the availability of primary and secondary schools within the village. This highlights the increasing awareness and value placed on education among the villagers.

Healthcare and Beliefs: Pathiar village has a sub-health center that serves a large population and is located about 500 meters from the village. For advanced medical care, residents travel to hospitals in Nagrota Bagwan. Despite access to modern healthcare facilities, some villagers still hold traditional beliefs in black magic or "Jhaadh-Fook" (faith healing practices). These beliefs persist alongside the use of modern medical services, indicating a blend of traditional and contemporary healthcare practices in the village.

Occupational Pattern: Agriculture and livestock rearing are the primary occupations in Pathiar village, providing the main source of livelihood for its residents. Only a small percentage of villagers are employed in the service sector. To meet their daily needs, some villagers engage in additional occupations such as spinning wool and weaving. Business activities in the village are primarily dominated by men. Agricultural production in Pathiar village is limited, with most farming carried out for subsistence purposes. Farmers continue to rely on traditional agricultural methods, including plowing, levelling, and manuring with cow dung. The majority of the population is engaged in agriculture compared to other sectors such as business and services. Additionally, villagers participate in daily wage labour and projects under the MGNREGA scheme implemented by the Panchayat.

Agricultural productivity remains low due to the continued use of outdated techniques and the lack of modern scientific methods. Consequently, the income generated from agriculture is lower compared to earnings from the service sector. Despite its lower financial returns, agriculture remains essential for the sustenance of local inhabitants. Different crops are grown throughout the year in Pathiar village. Major crops include wheat, rice, maize, fodder crops, mustard, and pulses, primarily cultivated for self-consumption. The cropping seasons are as follows:

- ✓ Kharif crops (June-September): Rice, maize, and fodder.
- ✓ Rabi crops (November-April): Wheat, mustard, and pulses.
- ✓ Zaid crops: Cucumber, tomato, potato, and beans.

Vegetables such as potatoes, tomatoes, and chilies are cultivated for personal use. Farmers in the village continue to follow traditional agricultural practices, using cow dung as a natural fertilizer. The practice of storing and applying animal dung near cropping fields using khapral remains prevalent. Additionally, villagers rear sheep and obtain raw wool, which undergoes multiple processing stages before becoming usable. While agriculture remains deeply rooted in the village's culture, the adoption of modern farming techniques and improved infrastructure could significantly enhance productivity and economic growth.

Education Statistics: An analysis of educational attainment in Pathiar village reveals that:

- ✓ 5% of the population has never attended school.

- ✓ 18% have completed only primary education.
- ✓ 16% have completed middle school.
- ✓ 19% have passed matriculation.
- ✓ 33% have completed higher secondary education (+2 level).
- ✓ Only 8% of the population has pursued higher education.

These figures indicate that while basic education is accessible to most residents, higher education levels remain relatively low.

Category Distribution: The demographic composition of Pathiar village, based on social categories, is as follows:

- ✓ Other Backward Classes (OBC) make up 65% of the population.
- ✓ General category residents constitute 20%.
- ✓ Scheduled Castes (SC) comprise 15% of the population.

This distribution highlights the predominance of OBC residents in the village.

Means of Transport: Most residents of Pathiar village have access to some form of transportation, including bicycles, two-wheelers, cars, and tractors. The distribution of vehicles is as follows:

- ✓ Four-wheelers (cars/jeeps) constitute 31%.
- ✓ Two-wheelers make up 24%.
- ✓ Tractors account for 14%.

The data suggests that four-wheelers are the most commonly used mode of transport in the village, followed by two-wheelers. This indicates a moderate level of mobility and access to personal transportation among the residents.

Source of Income: The income sources of the people in Pathiar village are categorized into three main sectors: primary, secondary, and tertiary. An analysis of the village economy reveals that the tertiary sector holds the largest share of income generation.

- **Primary Sector:** Contributing 37% to the local economy, the primary sector—comprising agriculture, livestock rearing, and related activities—has seen a decline in popularity. While it remains a significant livelihood source, interest in traditional farming methods has decreased.
- **Secondary Sector:** This sector, which includes small-scale industries and manufacturing, constitutes only 21% of the village's income. The low percentage indicates limited industrial or factory-based employment opportunities in the area.
- **Tertiary Sector:** The dominant source of income, the tertiary sector, accounts for 42% of economic activity. This suggests that a growing number of villagers are engaged in service-based occupations, business, and trade, reflecting a shift in employment preferences.

Pathiar village is particularly known for its potato cultivation, which benefits from an existing irrigation system. The promotion of crop diversification through irrigated farming presents a significant opportunity for economic growth. Strengthening the water user groups can ensure more efficient water distribution and support sustainable agriculture. Since this site specializes in potato farming—a key strategic crop—valuable insights can be drawn to enhance cultivation practices in other potato-producing regions. Farmers in the village also show a strong interest in market-oriented farming to secure better prices for their produce.

House Type: Housing structures in Pathiar village provide insights into the level of development and living standards. The distribution of house types is as follows:

- Cemented houses: 75% of homes are made of concrete, indicating significant development and improved living conditions.
- Kaccha houses: 20% of the houses are traditional mud structures, reflecting a section of the population still relying on conventional building materials.
- Mixed houses: 5% of the homes combine both cement and mud elements, showcasing a transition between traditional and modern housing styles.

The high percentage of cemented houses suggests that the village has seen infrastructure improvements and a shift toward durable and modern housing structures. This also indicates an overall improvement in the economic status of many residents. With ongoing development, the village is gradually moving towards modern living standards, and efforts to enhance rural infrastructure can further support this positive transformation.

Summary and Conclusion: Since the dawn of human civilization, rural settlements have continuously evolved, striving for development despite facing numerous challenges. The present study highlights the transformation occurring in Pathiar village, a rural settlement situated in the mountainous terrain of the Himachal Himalayas, below the Dhauladhar range. Despite harsh climatic conditions, limited resources, and rugged terrain, the village has witnessed changes in housing, demographics, infrastructure, and livelihoods.

The village is located near Baner Khad, a tributary of the Beas River, which serves as a lifeline for local livelihoods. Housing patterns indicate that 75% of residents live in pucca (cemented) houses, 20% in kuccha (mud) houses, and 5% in mixed structures. The demographic structure of the village shows that 65% of families follow a joint family system, while 35% consist of nuclear families. Family sizes vary, with 40% classified as small, 46% as medium, and 14% as large families. Pathiar village remains a male-dominated society where agriculture is the primary occupation. However, agricultural activities are largely limited to self-consumption due to small land holdings and traditional farming methods. To improve economic conditions, the introduction of modern farming techniques, horticulture, and animal husbandry is essential. Additionally, promoting fish farming with financial support can provide an alternative source of income.

Infrastructure development in the village has been progressing, with proper roads and transportation facilities in place. However, further improvements are necessary to enhance connectivity and ease access to markets. Government initiatives should focus on enhancing social infrastructure, providing financial support, and introducing training programs to encourage agricultural diversification and self-employment. Awareness campaigns at the village level can help residents explore opportunities in fish farming, modern agriculture, and entrepreneurship.

Overall, Pathiar village reflects a hardworking and resilient community. With the right interventions in infrastructure, agriculture, and skill development, the village can achieve sustainable growth and improved living standards for its inhabitants.

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