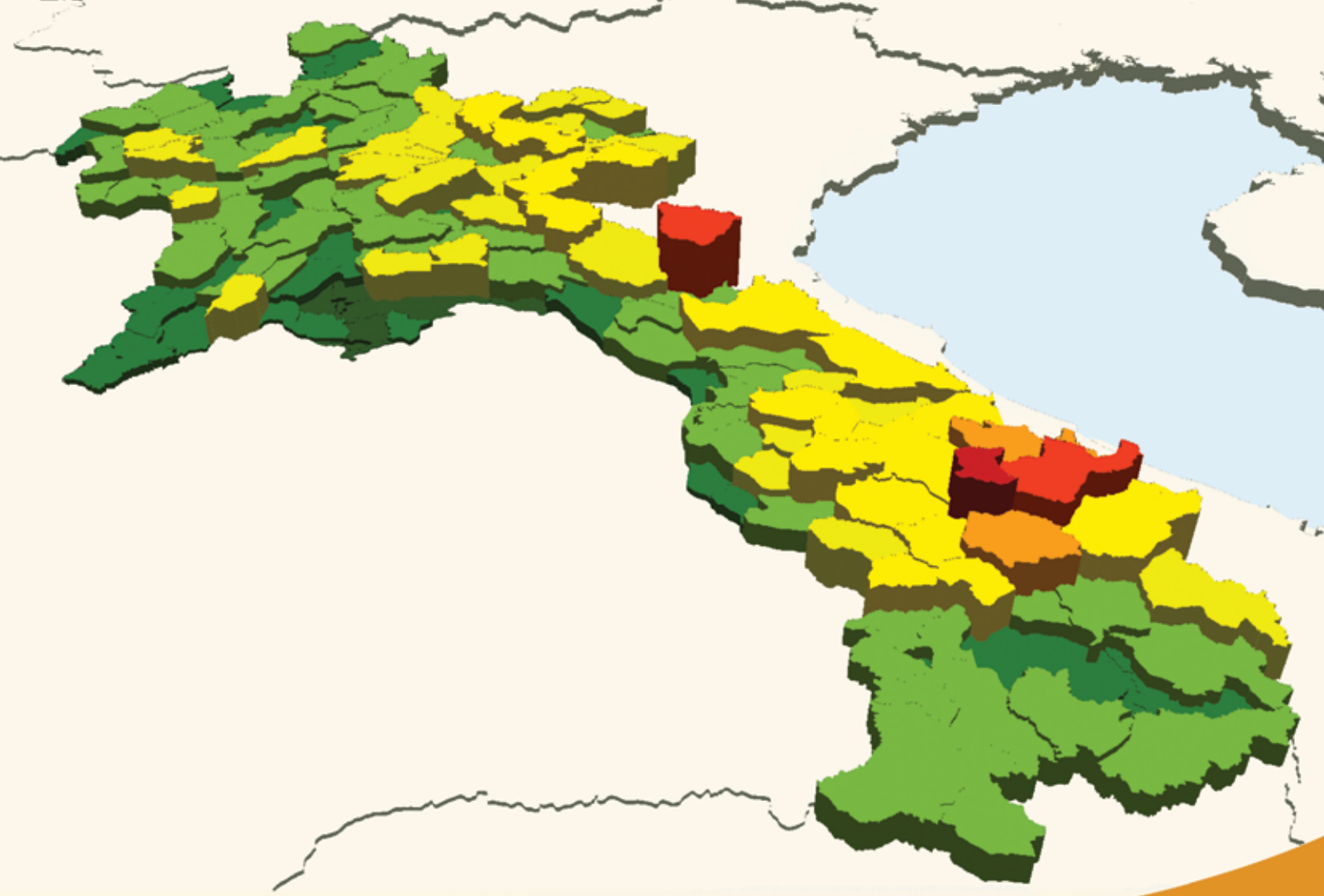

WHERE ARE THE POOR?

LAO PDR 2015 CENSUS-BASED POVERTY MAP: Province and District Level Results

June 2016

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Abstract

This report documents the construction of, and presents the main results from a poverty map of Lao PDR based on the 2012/13 LECS-5 survey and the 2015 Population and Housing Census. Monetary and non-monetary poverty indicators are presented at two different administrative levels: province and district. The non-monetary poverty indicators – closely related to the SDGs – were easily calculated directly from the Census databases. However, monetary poverty indicators are more challenging to compute as no income or expenditure information was collected by the Census. Based on a statistical methodology linking survey and Census datasets, poverty headcount and other monetary poverty indicators have been estimated at local levels. Two main findings stand out from the analysis of the results. First, the results show that for most indicators there is a relatively high level of heterogeneity across provinces and districts. Variations in poverty level (monetary or not) raises the possibility of more efficient geographical targeting. Second, we found that correlations between the different indicators are quite low in most cases. In such circumstances, policy makers need to have indicators specific to different projects or programmes. A one-size-fits-all indicator does not yield efficient outcomes for any intervention.

Foreword

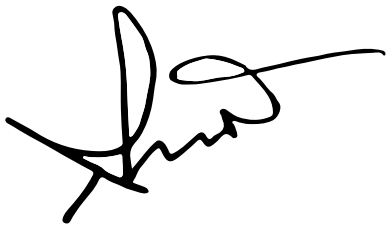
Over the last four years, the Lao Statistics Bureau has conducted two major activities that significantly improve our understanding of poverty in the Lao PDR. The fifth round of the Lao Expenditure and Consumption Survey (LECS 5) was conducted over a 12 month period spanning 2012 and 2013, and then the third national Population and Housing Census was conducted in 2015. Based on the former, the Lao Statistics Bureau and the World Bank Group published a poverty profile in 2014. It provided an update of poverty statistics from previous surveys and presented poverty estimates at the provincial level. Such information is very useful to monitor poverty over time and across provinces but does not permit to identify variation in poverty within districts or pinpoint where poverty is concentrated at the local level. The 2015 Population and Housing Census data was therefore combined with the LECS 5 using a sophisticated and reliable small-area statistical technique that made it possible to estimate poverty rates at the local level and therefore improve our knowledge of poverty at lower administrative levels and reveal pockets of poverty. Such local-level information greatly increases the targeting efficiency of projects and programs aiming at reducing poverty.

This report presents poverty indices at the district level based on small-area estimations, and uses the results to present maps of poverty in the country. Acknowledging that poverty is multi-dimensional, this report also presents non-monetary indicators that fit perfectly in the recently approved Sustainable Development Goals (SDG) framework.

This report is a product of a joint collaborative effort among the Lao Statistics Bureau (LSB), the Centre for Development and Environment (CDE) and the World Bank Group. It was made possible with financial support from the Australian Government, Department of Foreign Affairs and Trade, the Swiss Agency for Development and Cooperation through financing of the Lao DECIDE Info Project and the World Bank Group, through the LAOSTAT Project. The Lao Statistics Bureau greatly appreciates both the support received from these organizations and the great collaboration that ensured.

As this report comes at the start of the implementation of the 8th National Socio-Economic Development Plan, it is my hope that the results presented here will be used to prioritize the poorest districts and target programs to areas most in need, be it in terms of lack of income, or in terms of low level of education and employment activities or simply as not having basic infrastructure. The findings presented here will also serve as a benchmark for monitoring progress in reducing poverty during the implementation of the 8th National Socio-Economic Development Plan.

Dr. Samaychanh Boupha,
Vice Minister, Head of Lao Statistics Bureau



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I. Introduction

This report documents the construction of, and shows some results from, a monetary poverty map based on data from the 2012/13 Lao Expenditure and Consumption Survey (LECS-5) and the 2015 Population & Housing Census. Based on a methodology developed by *Elbers, Lanjouw and Lanjouw* (2003), we calculate monetary poverty indicators at low levels of aggregation, using the detailed information found in the survey and the exhaustive coverage of the population found in the Census. Results for the 18 provinces and 148 districts are presented and briefly analysed in this report.

In past decades poverty profiles[1] have been developed into useful tools to characterise, assess and monitor poverty. Based on information collected in household surveys, including detailed information on expenditures and incomes, these profiles present the characteristics of the population according to levels of monetary and non-monetary standards of living, while helping to assess the poverty reducing effect of some policies and to compare poverty levels between regions or groups or over time. While these household survey-based studies have greatly improved our knowledge of welfare levels of households in general and of the poorer ones in particular, the approach has a number of limitations. In particular, policy makers and planners need finely disaggregated information in order to implement their anti-poverty programs. Typically, they need information for small geographic units in order to optimize the efficiency of their decisions. Telling Laotian policy makers that the neediest people are in the rural areas would not be too impressive, since that information is well known and not very useful because it is too vague; telling them in which districts the poorest households are concentrated would be more useful and convincing! Using regional information often hides the existence of poverty pockets in otherwise relatively well-off regions, leading to poorly targeted programmes. Inefficient targeting could also occur if relatively well-off areas are contained in otherwise poor regions. Having better information at the local level would necessarily minimise leaks and therefore permit more cost-effective and efficient anti-poverty programmes. Poverty indicators are needed at a local level as spatial inequalities can be considerable within a given region.

For a first time, such information was developed in 2007 using small-area estimation techniques producing high-resolution poverty maps based on 2005 Lao PDR Population and Housing Census data and 2002/3 Lao Expenditure and Consumption Survey data (Epprecht *et al*, 2008). Spatially disaggregated poverty indicators have not been updated since.

The methodology used in this report to compute up-to-date monetary poverty indicators at a high level of spatial disaggregation using

[1] *See Pimhidzai et al. (2014) for the latest published poverty profile in Lao PDR.*

information on household expenditure, is fully consistent with poverty profile figures, and permits the computation of standard errors for these poverty indicators. Since these types of poverty maps are fully compatible with poverty profile results, they should be seen as a natural extension to poverty profiles, a way to operationalise poverty profile results.

Apart from monetary poverty indicators, this report also presents a series of non-monetary indicators, many of them being Sustainable Development Goal (SDG) indicators. From the Census database it is possible to compute 29 non-monetary indicators at the same administrative levels as the monetary indicators (province and district).

The paper is structured as follows: we first present the methodology used to compute the monetary and non-monetary poverty indicators in less technical language. Section 3 follows, containing the main results for the monetary and non-monetary indicators. In the last section some concluding remarks focus on the policy implications of the different findings. More technical presentations of the methodology and how it was applied in practice are found in Appendices 1 to 4. The results are presented in two different ways, maps (Appendices 5 and 6) and tables (Appendices 8, 9 and 10). Appendix 7 presents the correlation matrix between the different indicators.

II. Poverty Mapping Methodology

The indicators presented in this report use two different methodologies, one for the monetary poverty indicators and a second for the non-monetary indicators.

Monetary Poverty

The basic idea behind the methodology is rather straightforward. First a regression model of per-capita expenditure is estimated using LECS-5 survey data, limiting the set of explanatory variables to those that are common to both that survey and the latest Census. Next, the coefficients from that model are applied to the Census data set to predict the expenditure level of every household in the Census. And finally, these predicted household expenditures are used to construct a series of welfare indicators (e.g. poverty level, depth, severity, inequality[2]) for different geographical subgroups.

Although it is conceptually simple, proper implementation of this methodology requires complex computations. These complexities mainly arise from the need to account for spatial autocorrelation (expenditures of households within the same local area are correlated) and heteroskedasticity in the development of the predictive model. Taking into account these econometric issues ensures unbiased predictions. A further factor making computation non-trivial is our desire to compute standard errors for each welfare statistic. These standard errors are important because they tell us to what extent we can disaggregate the poverty indicators. As we disaggregate our results at lower and lower levels, the number of households to which the econometric models are applied decreases as well, therefore they yield less and less precise estimates. At a certain point, the estimated poverty indicators become too imprecise to be used with confidence. Computation of standard errors helps us decide where to stop the disaggregation process. The methodology used to estimate monetary poverty is further discussed in more technical terms in Appendix 1, while the datasets used are described in detail in Appendix 2. Appendices 3 and 4 show intermediate output in producing these monetary poverty indicators and argue that our results are reliable.

Non-monetary Poverty

Contrary to the monetary poverty indicators, which are very complex and time-consuming to compute, the non-monetary indicators are very straightforward to calculate and do not involve any estimation procedures. In most cases we simply take the proportion of individuals or household with a particular characteristics, like having electricity at home, for example.

[2] *Although a series of inequality measures were computed at the local level, the results are not presented in this report. Inequality at the local level is rather difficult to analyse and its interpretation can be misleading. However, inequality measurements are available to researchers on request.*

III. Results

This section presents the main results for both the monetary and non-monetary indicators.

Monetary Poverty Indicators

Based on the methodology described in the previous section and in Appendices 1 to 4, we obtained a series of poverty estimates for each province and district in Lao PDR. Those results can be found in Appendix 8. In these tables we present the three most common poverty indices found in the literature as well as in the latest Lao PDR Poverty Profile: poverty headcount, poverty gap index and poverty severity index[3]. Along with these poverty estimates for each administrative unit, we also present the population and the number of poor people. We converted these poverty figures into a series of maps for each administrative unit under study. Maps 1a and 1b present the poverty headcount estimates while the poverty gap index maps are found in Appendix 6 (Maps 2a and 2b). In order to better identify the different administrative units, the names of the different province and districts are found on a map in Appendix 5.

The use of maps rather than tables makes it possible to visualise a geographical pattern which is difficult to detect in the latter. It is also an efficient way to present the different figures. Examining Maps 1a and 1b, which show the poverty headcount by province and district respectively, it is notable how disaggregating poverty figures reveal a more detailed pattern of poverty. These maps clearly show how different parts of the 18 provinces are far from homogeneous. For example, the Borikhamxay province has both one of the poorest three district (Xaychamphone) in Lao PDR as well as two of the richest ones (Pakxane and Thaphabath). Some other provinces (Luangprabang, Xayaboury and Vientiane Province) also experience large variation in poverty headcount among their districts. In this type of environment, the usefulness of poverty maps becomes evident. Such variations in poverty headcount within a given province would make district-level targeting much more efficient that a simple province-level targeting. In other words, district level targeting would lead to more resources going to the poorest districts than otherwise. Poverty gap indices are presented in Maps 2, showing a similar spatial pattern as the poverty headcount.

Maps 1c shows side-by-side district-level maps for 2005 and 2015. There has been an overall decline in poverty across the board, but poverty declined more in the north. The geographical pattern of poverty has changed as a result, with more of the poorest districts now located in provinces in the south.

Figure 1 is a more formal way to examine these within-region variations in poverty rate. For each of the four regions (Vientiane Capital, North, Central and South), the vertical bar

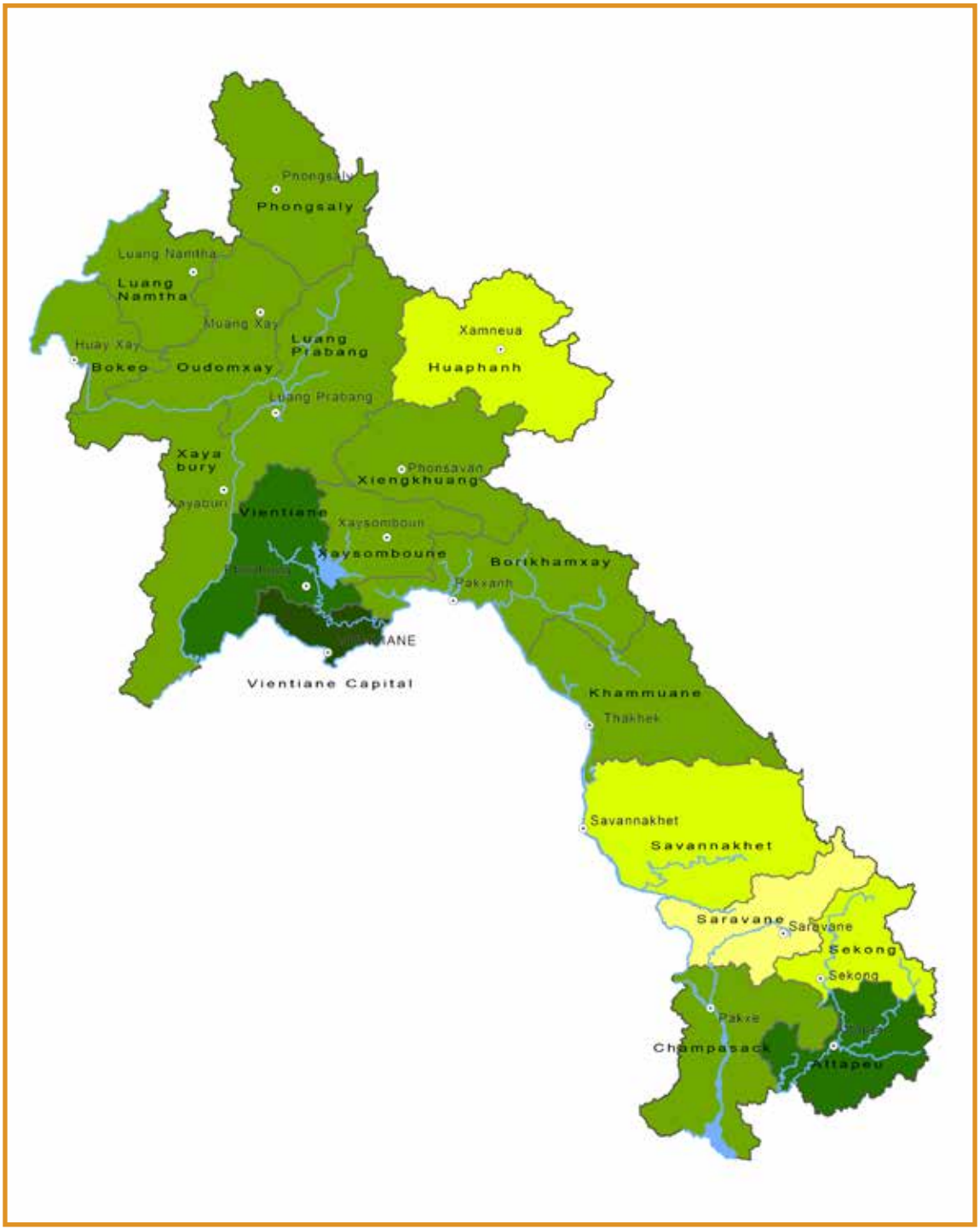
[3] *These three poverty indices are part of the FGT class of indices as developed by Foster et al. (1984)*

presents the range of poverty headcounts along with a bullet point showing the regional poverty headcount rate. Looking at the first panel showing the variation in poverty rates at the province-level, a considerable within-region spread of poverty rates in all three regions outside the capital can be observed. The poverty rates differ by around 17 percentage points within provinces in the North and by almost 30 percentage points in the South. The bottom panel presents the same figures at the district level and shows a significantly larger range of poverty headcount rates. The incidence of poverty is estimated to be 12.9 percent and 73 percent respectively, in the two districts with the lowest (Xaysetha District in Attapeu Province) and highest poverty rates (Toomlarm District in Saravane Province) in the South. This figure shows a considerable increase in information by moving from province to the district level. The highlighted large spread in poverty rates, particularly at the district level, demonstrates that poverty maps provide policy-makers with useful information for targeting the poorest districts.

Combining information on the level of poverty headcount and the actual number of individuals, Map 2 presents poverty density for Lao PDR. In that map, each red dot represents 100 poor individuals and it permits to geo-localize where the poor people are concentrated. Map 2 shows that poor people are mainly concentrated in two separate locations, a first one in the capital Vientiane and a second one around Saravane Province. Those two locations are very different. Vientiane, has the lowest poverty headcount but is the most populated part of the country, while the high poverty density in Saravane Province is mainly the result of being the poorest province in Lao PDR. In any poverty reduction scheme, those two areas would clearly call for different type of targeting strategies. In Saravane, the high poverty headcount and poverty density would call for geographical targeting covering potentially all individuals in the province. However, such type of targeting rule would yield a much higher level of leakage in Vientiane Capital. The large leakage (i.e. covering non-poor individuals) would demand a different targeting approach aiming at better reaching the poor individuals in an otherwise much richer province.

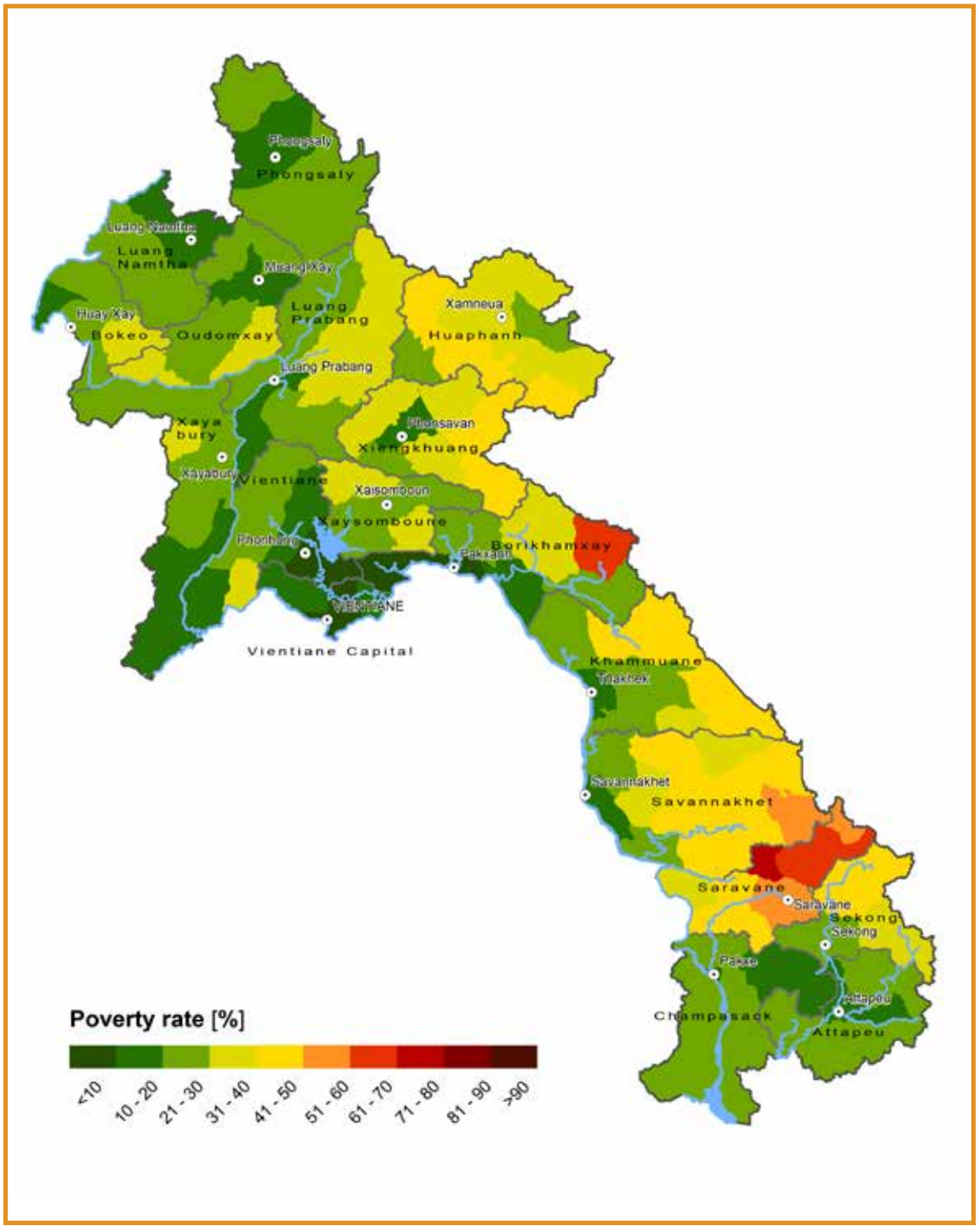
Map 1: Poverty Headcount (P0)

A. Province



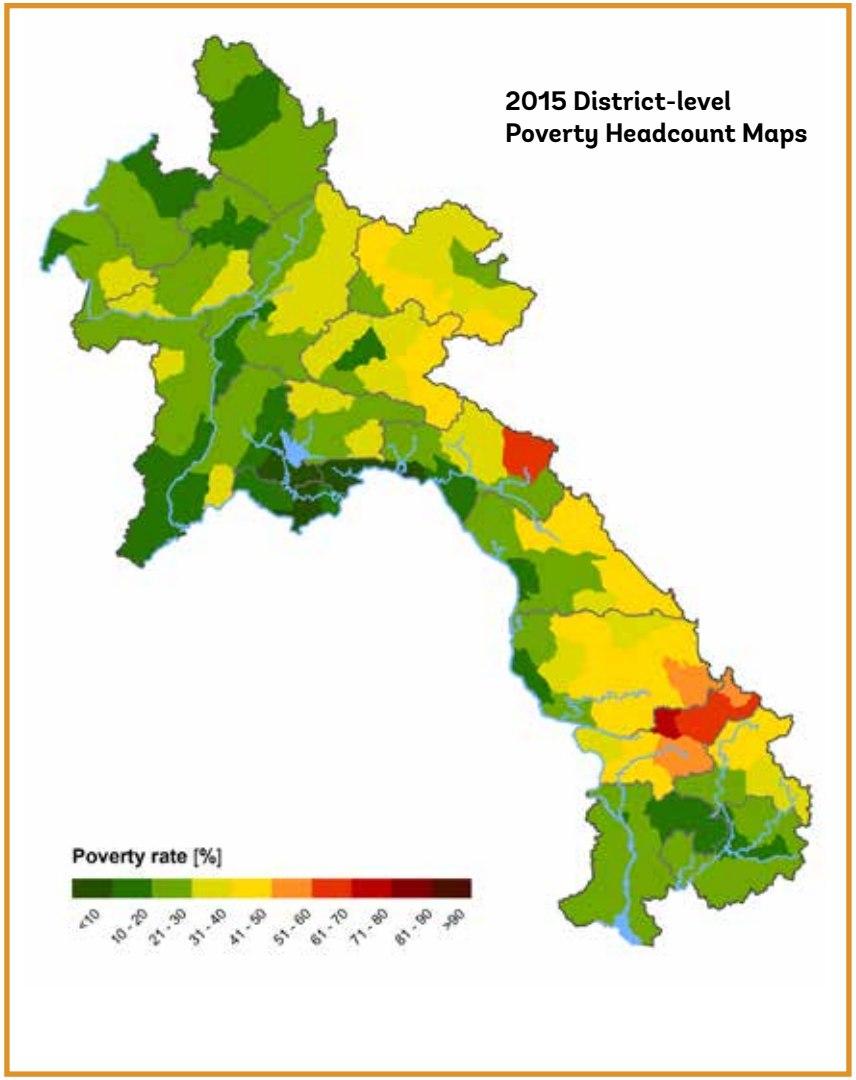
Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

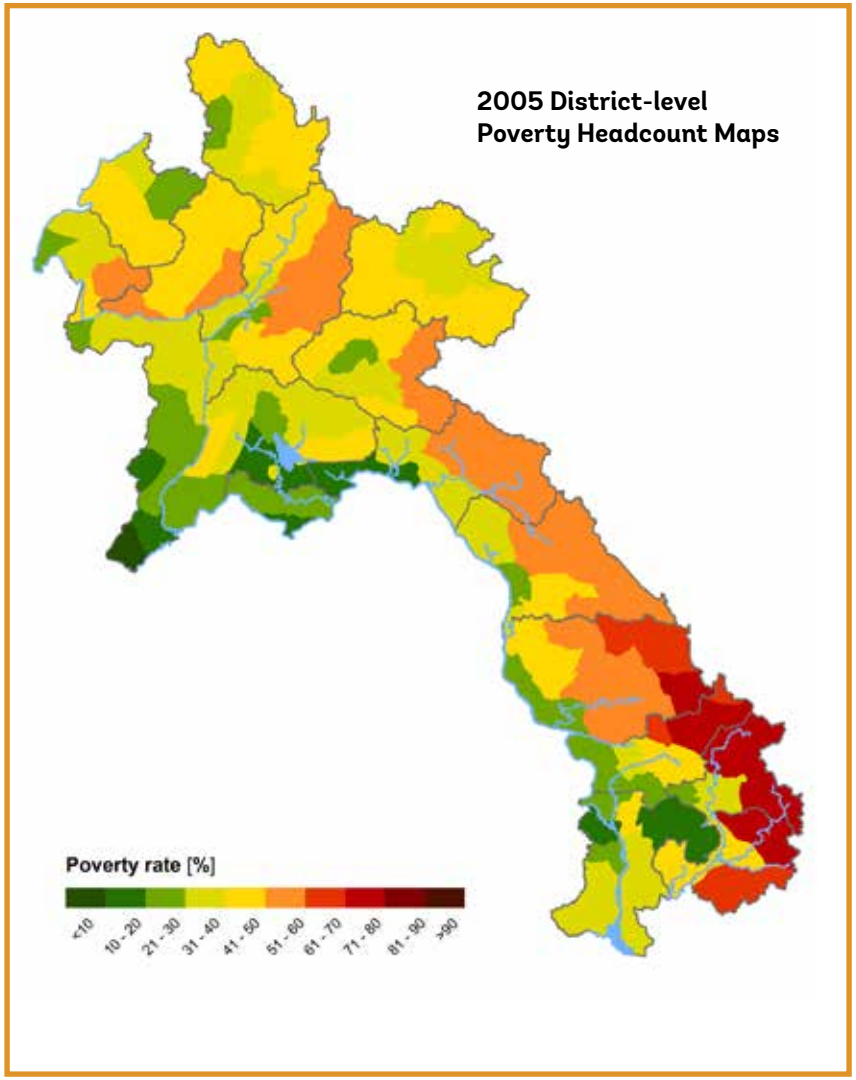
B. District



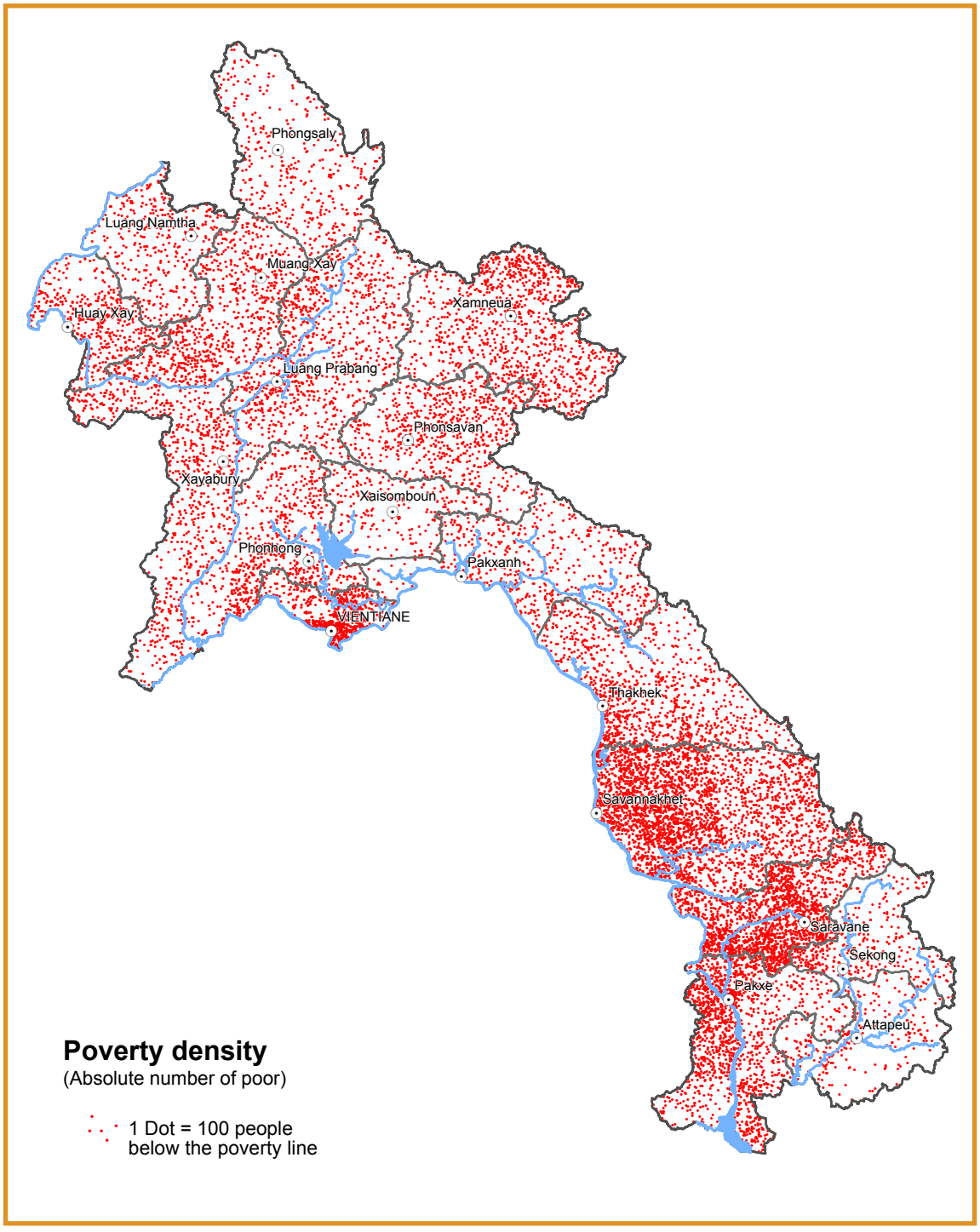
Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

C. 2005 versus 2015 District-level Poverty Headcount Maps





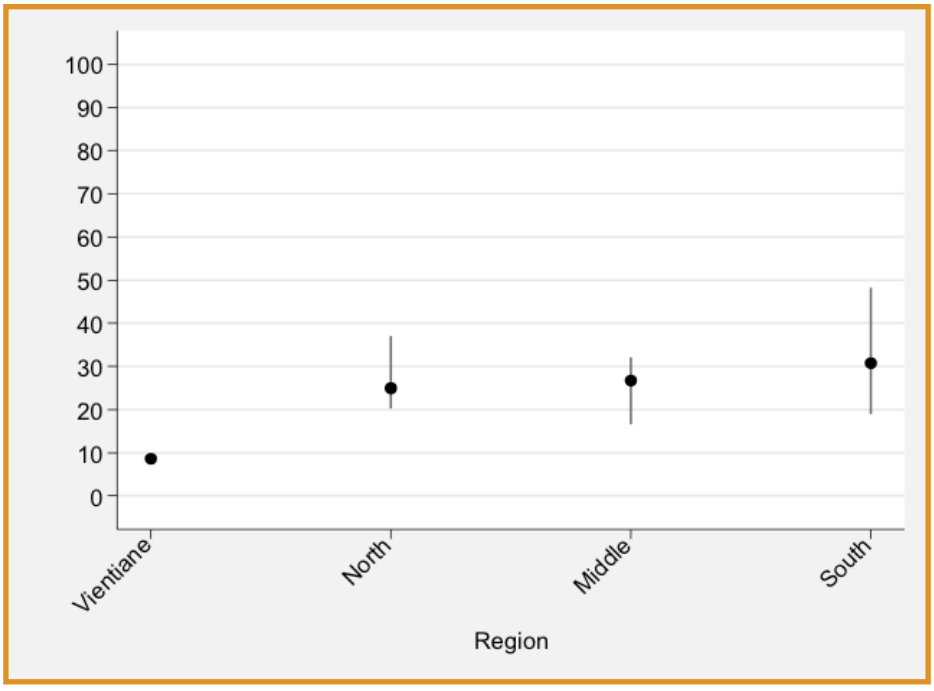
Map 2: Poverty Density



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

Figure 1: Local-Level Poverty Headcount Intervals, by region

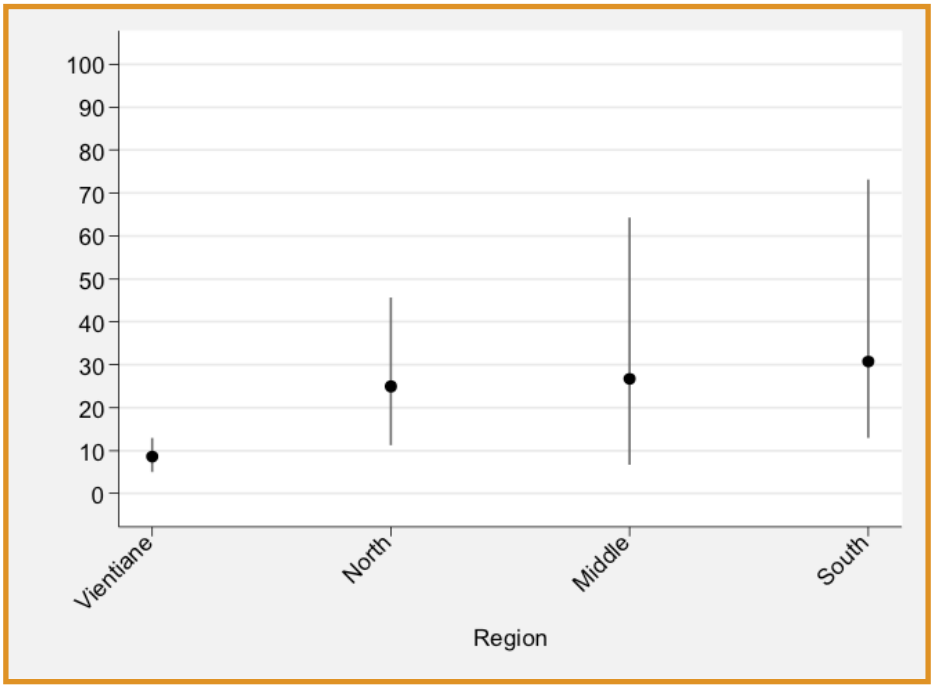
A. Province



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

Note: For each region the black dot gives the regional poverty headcount while the vertical line shows the range of poverty estimates at province level.

B. District



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

Note: For each region the black dot gives the regional poverty headcount while the vertical line shows the range of poverty estimates at district level.

Non-Monetary Indicators

The 18 Sustainable Development Goals (SDGs)[4] are currently monitored by around 250 different indicators. Many of them have already been computed at the national level in the case of Lao PDR. Having national level SDG indicators is useful for monitoring trends but policy-makers prefer disaggregated figures at the local level. SDG indicators at these administrative levels permit better geographical targeting and are therefore likely to reduce poverty more for a given budget. However many indicators are only meant to be computed at the national level (e.g. proportion of women in parliament). The first two indicators (poverty headcount and poverty gap ratio) have already been presented above. This section presents the results of 29 non-monetary indicators computed from the 2015 Lao PDR Census at the province and district levels. Although we could not, in some cases, compute SDG indicators according to their official definition, our non-monetary indicators are all inspired by SDGs even if in many cases we go beyond them. Since poverty is a multi-dimensional issue, these 29 indicators should be seen as complementary to the monetary poverty map indicators.

Table 1 defines each of these indicators and presents their computed values at the national level as well as the average by gender when appropriate. The province- and district-level figures are presented in a series of maps (Maps 4 to 24) in Appendix 6. In each case, two different panels map the figures by province and district. The index numbers, as shown in the first column of Table 1, are reproduced in the Map titles to simplify reading of the maps. Tables showing point estimates for the same statistics can be found in Appendix 9, for the education-related indicators, and Appendix 10 for the other indicators.

In all cases, the different province and district maps clearly show large spatial disparities between the different geographical units. Such spatial heterogeneity means that geographical targeting could yield significant efficiency gains if any of these indicators are used for targeting.

Maps 4 to 14 present the different education-related indicators while the other ones are found in Maps 15 to 24. Net school enrolment rates at the primary and, lower and upper secondary levels are presented in Maps 6, 7 and 8, respectively. At 75.5% (Table 1), primary school enrolment rates are clearly on the low side when compared to other countries. But that nationwide rate obviously hides large spatial disparities. Urban districts tend to have much higher rates while some isolated rural areas, suffer from very low rates. In particular, the isolated group of districts in the south-east part of the country along the Vietnam border has the lowest enrolment rates. The northern most districts also present below average enrolment rates. The same pattern holds for both lower and upper secondary enrolment but at much lower levels. This is particularly the

[4] *Although no data assessment of the different Sustainable Development Goal (SDG) indicators has been performed yet in Lao PDR, we believe we are presenting most SDG indicators that can be computed from 2015 Lao PDR Census database. Such data assessment has been done in only a handful of countries, including neighboring Myanmar (see Coulombe and Dietsch, 2016).*

case of female population. The next three Maps (9,10 and 11), present the gross enrolment rates for the same education levels. Having higher gross rates and net rates clearly shows that many children either start school at a later age than planned or do not progress as fast as they should. Otherwise the geographical pattern for the net and gross rates are similar.

Since literacy rates depends from past enrolment rates it is unsurprising that literacy rates – for both males and females – follow a geographical pattern similar to the school enrolment rate (Maps 4 and 5).

For both primary and secondary levels, we computed the girl-to-boy ratio among children attending school as a measure of gender inequality (see Maps 12). Nationwide, the ratio slightly favours boys at all education levels, (Table 1). Although these ratios vary widely across provinces and districts, no geographical pattern is discernible except that southwest districts along the Thai border seem to be closer to gender equality than elsewhere. We came to the same conclusion – that there is no discernible geographical pattern – for the other gender inequality indicator, namely the proportion of women in wage employment in the non-agricultural sector (Maps 21).

Out-of-school children is becoming more and more the focus of policy makers (UIS and UNICEF, 2015). Maps 13 and 14 shows out-of-school rates and numbers of out-of-school children for respectively the 6-11 and 12-18 age groups. Obviously the geographical pattern is somehow reciprocal to net or gross enrollment rate. For both age-groups the northern tip and the southern part of the country have the highest rates. However the actual numbers of out-of-school children would also depend on the population. Therefore, Vientiane has a significant number of out-of-school children even if the rate is not so high.

Maps 15 present the employment[5] rate for the 15 to 64 age group at both administrative levels, though we concentrate our discussion on district-level figures – the most disaggregated level presented in this report. A close examination reveals a very large spread in employment rates, from only 61% to a much higher 92%. No clear pattern emerges from the maps although districts with lower rates tend to be found in clusters, particularly in the case of female in districts close to the capital. Further investigation focussing on types of economic activities and infrastructure would be needed to fully explain that geographical pattern.

Nationwide, the percentage of self-employed workers stands at 85% (Table 1), but this figure conceals huge differences across districts. Map 16 shows that district-level figures range from relatively low level in districts around the capital to almost 100% in most remaining rural districts.

The unemployment rate among prime-age individuals (indicator [21]) is rather low at 1.1%, but the unemployment rate for the younger population (indicator [20]) is almost four times higher at 4.2%. Maps 17 and 18 show

[5] *In this report we define "employment" in its broadest meaning and therefore we include wage earners as well as non-employee workers such as employers, own account workers and unpaid family workers.*

that unemployment rates for both groups have a similar geographical pattern, with high unemployment rates essentially being a city phenomenon.

The proportion of non-agricultural workers reflect the economic transformation of a countries away from agricultural and toward manufacturing and services. Maps 19 and 20 show, without surprise, that the capital Vientiane and other predominately urban districts have most non-agricultural workers and that the rural areas remain deeply based on farming.

The demographic dependence rate is defined as the proportion of individuals unlikely to economically active, i.e. the population below 18 or older than 64 years old. A higher dependency rate makes households more likely to be poor, since fewer household members are breadwinners. Map 21 shows no real geographical pattern except a lower ratio in the four major cities and in the districts surrounding them.

From the Census questionnaire, a series of infrastructure indicators were calculated and are presented in Maps 23 & 24. Improved sanitation, improved source of drinking water, not using wood as the main source of cooking fuel, access to electricity and ownership of a phone all follow a rather similar geographical pattern although the levels are very different. For all those indicators rates are much higher in Vientiane and the surrounding provinces and districts. Otherwise, households living in districts along the Thai border are better off when standard of living is measured by those physical indicators.

Table 1: List of indicators computed at local levels

		National average		
No	**Indicator**	**Male**	**Female**	**Total**
1	Poverty Headcount (in %)	*n/a*	*n/a*	24.8
2	Poverty Gap Index (in %)	*n/a*	*n/a*	6.0
3	Proportion of individuals aged 15-24 being literate (in %)	94.0	90.1	92.0
4	Proportion of individuals aged 25-64 being literate (in %)	88.5	76.7	82.5
5	Net school enrolment rate in primary (in %)	75.8	75.3	75.5
6	Net school enrolment rate in lower secondary (in %)	41.0	41.0	41.0
7	Net school enrolment rate in upper secondary (in %)	23.4	20.1	21.7
8	Gross school enrolment rate in primary (in %)	101.9	97.6	99.8
9	Gross school enrolment rate in lower secondary (in %)	52.6	50.3	51.4
10	Gross school enrolment rate in upper secondary (in %)	39.2	33.3	36.2
11	Girl-to-boy ratio at primary school	*n/a*	*n/a*	0.93
12	Girl-to-boy ratio at lower secondary school	*n/a*	*n/a*	0.94
13	Girl-to-boy ratio at upper secondary school	*n/a*	*n/a*	0.90
14	Proportion of out-of-school 6-11 children (in %)	20.6	20.4	20.5
15	Proportion of out-of-school 12-18 children (in %)	35.0	39.8	37.4
16	Number of out-of-school 6-11 children	85800	83050	188850
17	Number of out-of-school 12-18 children	171020	195844	366864
18	Employment rate for the 15-64 age group (in %)	82.9	79.5	81.1
19	Self-employment rate for the 15-64 age group (in %)	79.2	87.1	83.1
20	Youth unemployment rate for the 15-24 age group (in %)	4.9	3.9	4.4
21	Unemployment rate for the 25-64 age group (in %)	1.2	1.1	1.2
22	Percentage of non-agric. wage earner workers in total employment (in %)	20.3	12.6	16.5
23	Percentage of non-agric. own-account workers in total employment (in %)	8.9	12.6	10.7
24	Proportion of individuals aged less than 18 or more than 64 years old (in %)	*n/a*	*n/a*	37.2
25	Female in wage employment in non-agricultural Sector (in %)	*n/a*	*n/a*	37.2
26	Proportion of married 17-year-old girls (in %)	*n/a*	*n/a*	18.1
27	Proportion of population using improved sanitation facility (in %)	*n/a*	*n/a*	71.1
28	Proportion of population using improved water source (in %)	*n/a*	*n/a*	83.9
29	Proportion of population NOT using firewood as cooking fuel (in %)	*n/a*	*n/a*	29.4
30	Proportion of population using electricity (in %)	*n/a*	*n/a*	85.6
31	Proportion of population having at least one phone at home (in %)	*n/a*	*n/a*	91.3

Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Census
Note: n/a means non applicable

Relationship between the Different Poverty Indicators

It has become customary to suggest that monetary poverty maps, which provide detailed information on monetary poverty at low levels of geographic disaggregation, can be used to target a wide range of programs. However, it is not clear whether an education or health program should also be targeted on the basis of monetary poverty indicators, as opposed to a map of education or infrastructure deprivation, however how that would be defined. This is why a substantial part of this study consists of providing different maps based on the 29 non-monetary indicators that could be computed from the Population and Housing Census 2015.

In the previous sub-section, we saw that in many cases the poverty headcount tends to be weakly associated with non-monetary indicators – we here formalize our examination of correlations between the different poverty indicators. A table of correlations between all 31 poverty indicators previously analysed at the district level can be found in Appendix 7. A close examination reveals that correlations are low in many cases, though some pairs of indicators are rather highly correlated. For example, electrification [30] is somehow correlated with improved sanitation [27] and phone ownership [31]; but its correlation with school enrolment depends on the level (mildly positive with secondary, but lower with primary).

Overall, the lack of high correlation between the monetary poverty headcount and other indicators (employment, education or infrastructure) clearly reveals the need to use more than one indicator to properly target the needy population. For example, we can imagine that an investment in public infrastructure could use both infrastructure and poverty indicators if the objective is to both reduce poverty and increase access to public services.

IV. Concluding Remarks

This report has documented the construction of a series of province- and district-level monetary poverty maps for Lao PDR, based on the most recent Population and Housing Census conducted in 2015 and the 2012/13 LECS-5 household survey. These results are consistent with the ones from the latest Poverty Profile and therefore can be viewed as an extension of the poverty profile – a way to operationalise its results. The monetary poverty maps are complemented by a series of non-monetary indicators focussing on employment, education and infrastructure. All the different indicators were computed for each of the 18 provinces and 148 districts of Lao PDR.

However interesting these results may be, they are only valuable if properly used. How? Among other possibilities, these results can be used to design budget allocation rules to be applied by different administrative levels to their subdivisions. For example, when the Central Government has a budget to be distributed amongst the different districts and wishes to maximise its effect on poverty alleviation, a key question is should that budget be distributed? Based on monetary poverty indicators, different rules can be adopted.

Using non-monetary indicators to raise the standard of living of the population can be easier, although it would necessarily target with different objectives. For example, if policy-makers want to improve access to electricity, it is straightforward to target districts such as Xaychamphone (in Borikhamxay province) – along with many others – that have the lowest access to electricity and incidentally is also of the poorest district. However multiple indicators approach would be trickier in districts such as Samphanh (in Phongsaly Province) which has a relatively low poverty headcount ratio but have a massive lack of access to electricity.

These maps could be a key tool in support of the decentralisation process currently undertaken in Lao PDR. For example, we can imagine that the Government would distribute a budget to provinces or districts according to their level of monetary poverty, and then the local authority would use that budget to prioritise investment (in health, education, infrastructure etc.) according to its own local needs, using non-monetary indicators as guidelines.

Others uses of the poverty map might include the evaluation of locally targeted anti-poverty programs, for example monitoring progress in priority districts. Finally, researchers could use it in a multitude of ways, such as for studying relationships between poverty distribution and different socio-economic outcomes.

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Appendix 1: Monetary Poverty Methodology

The basic idea behind the methodology developed by Elbers, Lanjouw and Lanjouw (2003) is straightforward. First, a regression model of log of per-capita expenditure is estimated using survey data, employing a set of explanatory variables which are common to both a survey and a Census. Next, parameters from the regression are used to predict expenditure for every household in the Census. And third, a series of welfare indicators are constructed for different geographical subgroups.

The term "welfare indicator" embraces a whole set of indicators based on household expenditures. This note emphasises the poverty headcount (P0), but the usual poverty and inequality indicators can be computed (Atkinson inequality measures, generalised Entropy class inequalities index, FGT poverty measures and Gini).

Although the idea is rather simple, its proper implementation requires complex computation if one is to account for spatial autocorrelation and heteroskedasticity in the regression model. Furthermore, proper calculation of the different welfare indicators and their standard errors increase the complexity greatly.

The discussion below is divided into three parts, one for each stage necessary in the construction of a poverty map. This discussion borrows from the original theoretical papers of Elbers, Lanjouw and Lanjouw as well as from Mistiaen *et al.* (2002).

First stage

In the first instance, we need to determine a set of explanatory variables from both databases that meet some criteria of comparability. In order to be able to produce a poverty map consistent with the associated poverty profile, it is important to only select variables that are fully comparable between the Census and the survey. We start by checking the wording of the different questions as well as the proposed answer options. From the set of selected questions we then build a series of variables which are tested for comparability. Although we might want to test the comparability of the whole distributions of each variable, in practice we only test the equality of their means. In order to maximise the predictive power of the second-stage models, all analyses are performed at the strata level, including tests of the comparability of the different variables on which the definitive models are estimated.

The list of all potential variables and their equality of means test results are available on request.

Second stage

We first model per-capita household expenditure using the survey database. In order to maximise accuracy, we estimate the model separately for the urban areas and rural areas.

Let us specify a household level expenditure (y_{ch}) model for household h in location c, $\boldsymbol{x}_{ch}$ is a set of explanatory variables, and $\boldsymbol{u}_{ch}$ is the residual:

$$\ln y_{ch} = E[\ln y_{ch} \mid \boldsymbol{x}_{ch}] + \boldsymbol{u}_{ch} \quad (1)$$

The locations represent clusters as defined in the first stage of typical household sampling design. Typically, they correspond to Census enumeration areas, although this is not necessary. The explanatory variables need to be present in both the survey and the Census, and need to be defined similarly. They also need to have the same moments in order to properly measure the different welfare indicators. The set of potential variables is defined in the first stage.

If we linearize the previous equation, we model the household's logarithmic per-capita expenditure as

$$\ln y_{ch} = \boldsymbol{x}'_{ch}\boldsymbol{\beta} + \boldsymbol{u}_{ch}. \quad (2)$$

The vector of disturbances u is distributed $\boldsymbol{F}(0,\boldsymbol{\Sigma})$. Model (2) is estimated by Generalised Least Square (GLS). To estimate this model we need first to estimate the error variance-covariance matrix $\boldsymbol{\Sigma}$ in order to take into account possible spatial autocorrelation (expenditure from households within a same cluster are surely correlated) and heteroskedasticity. To do so we first specify the error terms as

$$\boldsymbol{u}_{ch} = \boldsymbol{\eta}_c + \boldsymbol{\varepsilon}_{ch} \quad (3)$$

where $\boldsymbol{\eta}_c$ is the location effect and $\boldsymbol{\varepsilon}_{ch}$ is the individual component of the error term.

In practice, we first estimate equation (2) by simple OLS and use the residuals as estimates of the overall disturbances, given by $\hat{\boldsymbol{u}}_{ch}$. We then decompose these residuals into uncorrelated household and location components:

$$\hat{\boldsymbol{u}}_{ch} = \hat{\boldsymbol{\eta}}_c + \boldsymbol{e}_{ch} \quad (4)$$

The location term ($\hat{\boldsymbol{\eta}}_c$) is estimated as the cluster mean of the overall residuals, and therefore the household component ($\boldsymbol{e}_{ch}$) is simply subtracted. The heteroskedasticity in the last error component is modelled by the regressing its square ($\boldsymbol{e}^2_{ch}$) on a long list of all independent variables of model (2), their squares and interactions as well as imputed welfare. A logistic model is used[6].

Both error computations are used to produce two matrices, which are then summed to $\hat{\boldsymbol{\Sigma}}$, the estimated variance-covariance matrix of the original model (2). This matrix is used to estimate the final set of coefficients of the main model (2).

Third stage

To complete the map, we associate the estimated parameters from the second stage with the corresponding characteristics of each household found in the Census to predict the log of per-capita expenditure and the simulated disturbances.

6. *See Mistiaen et al. (2002) for further details on how the theoretical model is estimated in practice.*

Since the very complex disturbance structure has made computation of the variance of the imputed welfare index intractable, bootstrapping techniques were used to obtain a measure of the dispersion of that imputed welfare index. From the previous stage, a series of coefficients and disturbance terms have been drawn from their corresponding distributions. Then, for each household found in the Census, we simulate a value of welfare index ($\hat{y}^{r}_{ch}$) based on the predicted values and the disturbance terms:

$$\hat{y}^{r}_{ch} = exp(x'_{ch}\tilde{\beta}_{c} + \tilde{\eta}^{r}_{c} + \tilde{\varepsilon}^{r}_{ch}) \quad (5)$$

That process is repeated 100 times, each time redrawing the full set of coefficients and disturbance terms. The mean of the simulated welfare index becomes our point estimate and the standard deviation of our welfare index is the standard error of these simulated estimates.

Photo by Stanislas Fradelizi / World Bank, 2011

Appendix 2:
Databases and Lao PDR Administrative Layers

The construction of such monetary poverty maps is very demanding in terms of data. The minimal requirement is a household survey having an expenditure module and a population and housing Census. If it is not already available, a profile of monetary poverty must be constructed from the survey. The household-level welfare index and the poverty line from such a poverty profile could be used to construct the poverty maps. Apart from household-level information, community level characteristics are also useful in the construction of a poverty map, as differences in geography, ethnicity, access to markets, public services and infrastructure, and other aspects of public policy can all lead to substantial differences in the standard of living, whether defined in monetary terms or not. In the case of Lao PDR, some of that information is available.

Non-monetary indicators are computed directly from the Census database, without any complex statistical procedures.

Census

The latest Population and Housing Census was conducted in 2015. The questionnaire is relatively detailed but contains no information on either household incomes or household expenditures. At the individual level, it covers demography, education, economic activities and durable good ownership. At the household level, dwelling characteristics are covered. The Census database covers all individuals. However, we limited our analyses to "regular households" and therefore did not take into account individuals living in collective households (e.g. hostels, boarding schools or penitentiaries) in order to have a Census database consistent with the LECS-5 survey sample. Therefore, our poverty map is based on 6,280,000 individuals grouped into 1,198,000 households.

LECS-5 Survey

The Lao Expenditure and Consumption Surveys (LECS) are national survey that collect expenditure data at household level. The one conducted in 2012/13, it is the most appropriate in terms of timing and also collected information similar to that in the Census questionnaire. LECS-5 covers a sample of 8,196 households with around 43,500 individuals.

The welfare index used in our regression models (per-capita expenditure) is the same as the one used in the latest poverty profile based on the LECS-5 database (Pimhidʒai et al., 2014). Using the same household-level welfare index and the associated poverty lines ensures full consistency between the poverty profile and the new poverty map. It also makes it possible to test whether the predicted poverty indicators match those found in the poverty profile at the strata level, the lowest statistically robust level achievable in LECS-5.

Administrative Layers

The administrative structure of Lao PDR is simple. The top tier is composed of 18 provinces that are broken-down into 148 districts. Those districts are composed of 1,282 kumbans and 8,500 villages. In the largest cities, villages should be seen as neighbourhoods. Table 2 presents some descriptive statistics on the size of these different administrative levels. The districts vary a lot in terms of population, from Longcheng, with only 6579 people residing in 1,354 households, to Xaythany, a district of Vientiane, with more than 38,800 households having a total of 183,000 individuals in 2015. As discussed previously, we need a minimal number of households per administrative unit in order to compute statistically robust monetary poverty indicators and in the case of Lao PDR, almost all districts yield robust poverty estimates. However, computation of poverty estimates at kumban and village levels gave results that we deemed not robust enough to be used. The very small of population of many kumbans and most villages yield poverty figures that are not as precise as we would like.

Table 2: Descriptive Statistics on the Lao PDR Administrative Structure

Administrative Unit	# of Units	Number of Households		
		Median	Minimum	Maximum
Province	18	52,526	13,908	166,344
District	148	6,457	1,354	38,825
Kumban	1,282	684	44	8,204
Village	8,500	100	5	1,743

Source: Authors' calculation based on the 2015 Census

Appendix 3: Monetary Poverty Methodology in Practice

In Appendix 1, we describe in detail the methodology behind computation of monetary poverty from a theoretical perspective, while the second appendix presents the required datasets. The current appendix shows how the theoretical methodology is applied in practice.

In order to maximise the accuracy of the poverty estimates we estimate econometric models for each of the three regions of Lao PDR (Northern, Central and Southern) broken down into urban and rural areas, with Vientiane Capital being a separate strata. A household level expenditure model has been developed for each of these strata using explanatory variables which are common to both the LECS-5 and the Census. The procedure can be split into three separate stages:

Stage 1: Aligning the data

The first task was to make sure the variables deemed common to both the Census and the survey really measure the same characteristics. In the first instance, we compared the questions and modalities in both questionnaires to identify potential variables. We then compared the means of these (dichotomised) variables and tested whether they were equal using a 95% confidence interval. Restricting ourselves to these variables should ensure that our predicted welfare figures will be consistent with the survey-based poverty profile[7]. As noted above, that comparison exercise was done at strata level. The survey's two-stage sample design was taken into account in the computation of the standard errors.

Stage 2: Survey-based regressions

Appendix 4 presents the strata-specific regression (Ordinary Least Squares) results based on the 2012/13 LECS-5 survey. The ultimate choice of independent variables was based on a backward stepwise selection model. A check of the results confirmed that all the coefficients have the expected sign. As previously indicated, these models are not for discussion. They are exclusively prediction models, not determinants of poverty models that can be analysed in terms of causal relationships. In the models used for the poverty map we were only concerned with the predictive power of the regressors without regard, for example, to endogenous variables. We also ran a series of regressions using the base model residuals as dependent variables. These results – not shown here – are used in the last stage in order to correct for heteroskedasticity[8].

7. *We also deleted or redefined dichotomic variables less than 0.03 or more than 0.97 to avoid serious multicollinearity problems in our econometric models.*
8. *As described in the methodology section and Appendix 1, two statistical problems are likely to violate Ordinary Least Squares assumptions. Spatial autocorrelation (expenditure from households within a same cluster are surely correlated, i.e. there are location effects) is minimized by incorporating into the regressions the means of some key Enumeration Area variables. Heteroskedasticity (error terms are not constant across observations) is corrected by modelling the error terms. Correcting for these two problems yields unbiased estimates. See Elbers et al. (2002, 2003) and Mistiaen et al. (2002) for more details.*

Table 3: Poverty Rates based on LECS-5 (actual) and 2015 Census (predicted), by region

	Poverty Headcount (P0)		Poverty Gap Index (P1)		Poverty Severity Index (P2)	
	LECS-5 (Actual)	Census (Predicted)	LECS-5 (Actual)	Census (Predicted)	LECS-5 (Actual)	Census (Predicted)
Vientiane	5.9	8.5	1.5	2.0	1.5	0.7
	(1.3)	(1.2)	(0.3)	(0.4)	(0.3)	(0.2)
North Urban	8.9	11.2	1.7	2.4	1.7	0.8
	(1.8)	(1.6)	(0.4)	(0.5)	(0.4)	(0.2)
Central Urban	12.9	14.8	3.1	3.3	3.1	1.1
	(2.7)	(1.8)	(0.9)	(0.5)	(0.9)	(0.2)
South Urban	16.2	19.8	3.5	5.4	3.5	2.1
	(4.5)	(2.6)	(1.5)	(1.0)	(1.5)	(0.5)
North Rural	29.9	30.1	6.9	6.7	6.9	2.2
	(2.6)	(1.4)	(0.9)	(0.5)	(0.9)	(0.2)
Central Rural	26.9	30.8	6.0	7.2	6.0	2.5
	(2.7)	(1.3)	(0.8)	(0.5)	(0.8)	(0.2)
South Rural	32.1	33.9	8.4	9.4	8.4	3.7
	(3.7)	(1.9)	(1.3)	(0.7)	(1.3)	(0.4)

Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Census
Note: Robust standard errors are in parentheses.

The R^2s of the different regional regressions fall between 0.21 and 0.50. Although the Vientiane regression has a quite low R^2 at 0.21, the remaining OLS regressions yield R^2 [0.34-0.50] that are relatively large for survey-based cross-section regressions and can be very favourably compared with results from poverty maps constructed in Asia or Africa. While these coefficients look "credible", it is important to note that the models are purely predictive in the statistical sense and should not be viewed as determinants of welfare or poverty. For these regressions, the R^2s were mainly bounded by four important factors. First, in many areas households are rather homogeneous in terms of observable characteristics even if consumption varies significantly. That necessarily yields a lower R^2. Second, a large number of potential correlates are simply not observable using survey questionnaires. Third, some good predictors were discarded during the first stage since their distributions (mean and standard error) did not appear to be identical. And finally, many indicators do not take into account the quality of the correlates. Not accounting for the wide variation in quality of the different observable correlates makes many of the potential correlates useless in terms of predictive power.

Stage 3: Welfare indicators[9]

Based on the results from the previous stage, we applied the estimated parameters[10] to the Census data to compute a series of poverty indicators: the headcount ratio (P0), the poverty gap index (P1) and the poverty severity index (P2). Table 3 presents estimated poverty figures for each strata and compares them with actual figures from the latest survey-based poverty profiles. For each strata and poverty indicator, the equality of LECS-5-based and Census-based indicators cannot be rejected (using a 95% confidence interval)[11]. The difference between the LECS-5-based and Census-based headcount ratio is minimal in all cases. Although Census-based poverty figures can only be compared with the ones provided by the LECS-5 survey at the strata level, equality of these poverty figures provides an excellent test of the reliability of the methodology used here.

After having established the reliability of the different predictive models, we estimated poverty figures for the three disaggregated levels described in Table 2: province and district. Before presenting the actual results we need to determine whether they are precise enough to be useful. As discussed in the methodological section, the precision of the poverty estimates declines as the number of households in the different administrative units falls. While we expect district-level poverty estimates to be precise enough it is legitimate to be more skeptical about sub-district estimates.

How low can we go?

In order to pass an "objective" judgement on the precision of these estimates we computed coefficients of variation for the three top administrative levels (province, district and kumban) and then compared them with an arbitrary but commonly-used benchmark. Figure 2 presents the headcount incidence coefficients of variation of province-, district- and kumban-level estimates and compares them to a 0.2 benchmark. The lower curve (represented by xs) in Figure 2 clearly shows that our province-level headcount poverty estimates do rather well while the accuracy of district-level estimates fare very well in most cases except in a few districts for which the coefficient of variation is above the 0.2 benchmark. However, the results for the 1282 kumbans clearly show very high coefficients of variation for most kumbans which pose a real problem of reliability. Given that single reason we decided to not present kumban estimates and even less village ones. Figure 3 plots these coefficients of variation against poverty

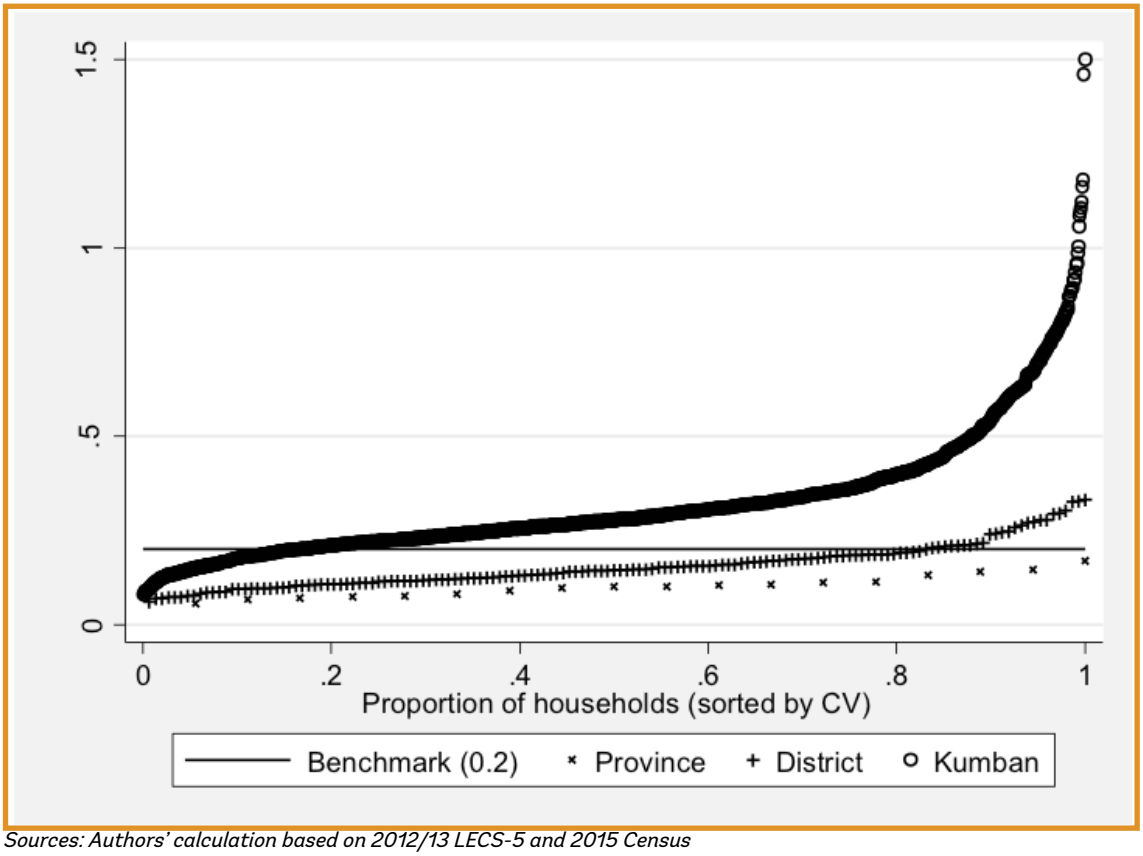
9. Computation of the welfare indicator has been greatly simplified thanks to PovMap 2.0, a computer program especially written to implement the methodology used here. We used the latest version developed by Zhao and Lanjouw (2012).

10. Apart from regression models explaining the household welfare level, we also estimated a model for the heteroskedasticity in the household component of the error. We also estimated the parametric distributions of both error terms for the simulations. See the methodological Appendix for further details.

11. It is worth noting that the standard errors of the mean of the Census-based figures are systematically lower than the ones calculated from LECS-5.

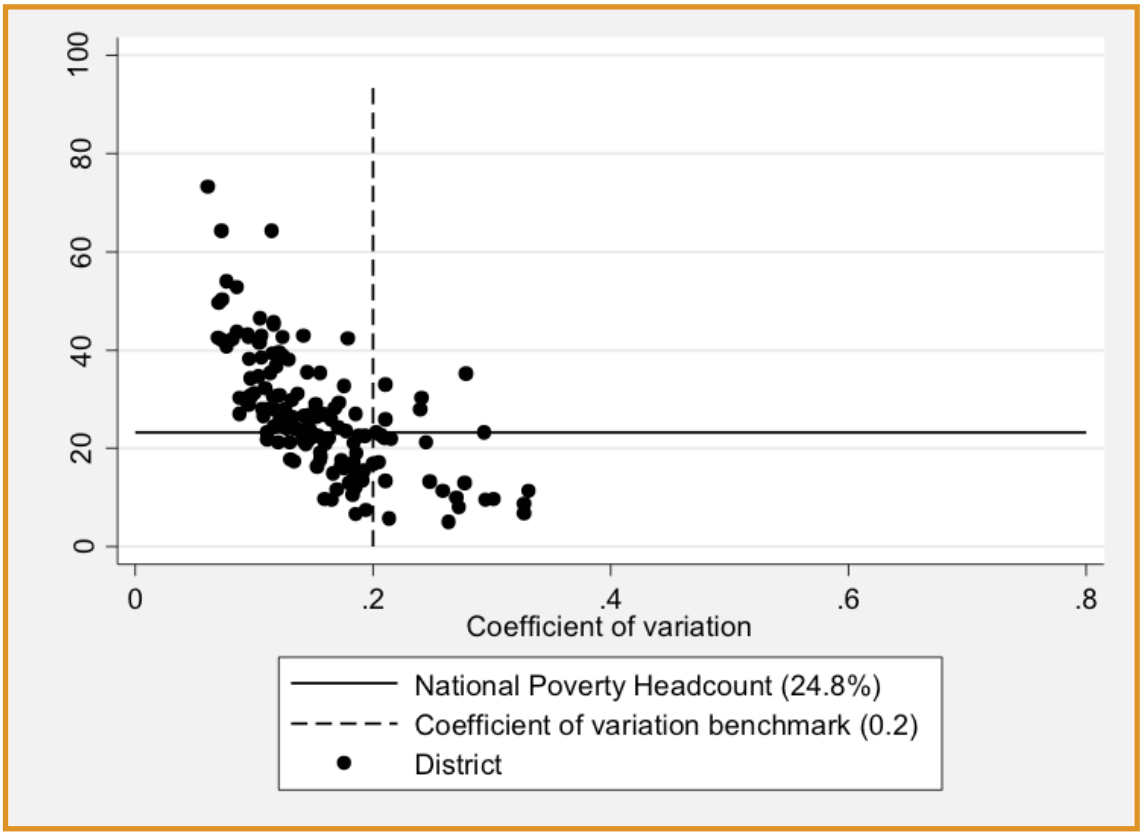
headcount for each district, the lowest level for which we are presenting results. It shows that amongst the districts with higher coefficients of variation all have a poverty headcount level well below the national level (24.8%). Since one of the main applications of the poverty map would be to target the poorest provinces and districts areas we believe that level of precision of the relevant geographical areas is acceptable and suitable for targeting purposes. Actually they are among the least poor districts and therefore much less likely to be targeted by any poverty alleviation program. It is clear that our poverty estimates at disaggregated levels would provide policy-makers with good guides.

Figure 2: Poverty Headcount Accuracy, by administrative level



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Census

Figure 3: Poverty Headcount and Coefficients of Variation, by District



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Census

Photo by Bart Verweij / World Bank, 2014

Appendix 4: Survey-Based Regression Models

Strata 1: Vientiane Capital

Number of observation			763
R-square			0.215
Variable	Coef.	Std.Err.	t-ratio
Intercept	13.5194	0.1121	120.57
Has a computer (0/1)	0.3041	0.0542	5.61
Uses wood as cooking fuel (0/1)	-0.1210	0.0521	-2.32
Number of elderly individuals	-0.2559	0.1149	-2.23
Floor in ceramic (0/1)	0.2313	0.0467	4.95
Head has upper sec. education (0/1)	0.1384	0.0487	2.84
Household Size (in log)	-0.3448	0.0602	-5.73
Has a motorcycle (0/1)	-0.1767	0.0866	-2.04
Has a phone (0/1)	0.1115	0.0483	2.31
Spouse has vocational training (0/1)	0.2430	0.0866	2.81

Strata 2: Urban Northern Region

Number of observation			655
R-square			0.405
Variable	Coef.	Std.Err.	t-ratio
Intercept	13.8648	0.1097	126.41
Has a car (0/1)	0.3064	0.0511	5.99
Uses wood as cooking fuel (0/1)	-0.2068	0.0536	-3.86
North Midland Ecological Zone (0/1)	0.2032	0.0444	4.57
Number of elderly individuals	-0.0678	0.0345	-1.96
Has a fridge (0/1)	0.1607	0.0502	3.20
Head is Khmer (0/1)	-0.1587	0.0605	-2.63
Head has some primary education (0/1)	-0.1140	0.0566	-2.01
Household Size (in log)	-0.6282	0.0525	-11.97
Has a phone (0/1)	0.1068	0.0399	2.68
Reside in Xayaboury Province (0/1)	-0.2002	0.0433	-4.62
Spouse is self-employed in agriculture (0/1)	-0.1478	0.0418	-3.53
Has a TV (0/1)	0.1641	0.0750	2.18

Strata 3: Urban Central Region

Number of observation			701
R-square			0.370
Variable	Coef.	Std.Err.	t-ratio
Intercept	13.7450	0.1430	96.13
North Lowland Ecological Zone (0/1)	-0.1450	0.0565	-2.57
Floor in concrete (0/1)	-0.2246	0.0524	-4.29
Floor in other material (0/1)	-0.5920	0.1268	-4.67
Floor in wood (0/1)	-0.4472	0.0815	-5.49
Age of head squared	0.00002	0.00001	2.57
Head has tertiary education (0/1)	0.3190	0.0870	3.67
Head is self-employed in agriculture (0/1)	-0.1124	0.0471	-2.39
Head has vocational training (0/1)	0.2761	0.0668	4.13
Household Size (in log)	-0.5645	0.0589	-9.58
Number of prime-age male	0.0840	0.0274	3.07
Has a motorcycle (0/1)	0.2930	0.0779	3.76
Reside in province (0/1)12_1	-0.1416	0.0578	-2.45
Spouse has upper secondary education (0/1)	0.1704	0.0746	2.29
Spouse has vocational training (0/1)	0.2501	0.0892	2.80
Village has a primary school (0/1)	-0.1870	0.0662	-2.83
Wall is in brick (0/1)	-0.1613	0.0708	-2.28

Strata 4: Urban Southern Region

Number of observation			335
R-square			0.501
Variable	Coef.	Std.Err.	t-ratio
Intercept	13.8173	0.1410	97.97
Number of boys aged 7-14	-0.0799	0.0387	-2.06
Has a car (0/1)	0.2486	0.0661	3.76
Household Size (in log)	-0.6412	0.0725	-8.84
Reside in Attapeu Province (0/1)	0.3771	0.0731	5.16
Spouse works in public sector (0/1)	0.2336	0.0794	2.94
Village has a market (0/1)	-0.3519	0.0587	-5.99
Village has a primary school (0/1)	0.1721	0.0759	2.27
Has wall in other material (0/1)	-0.1521	0.0564	-2.69
Has a washing machine (0/1)	0.3446	0.0626	5.50

Strata 5: Rural Northern Region

Number of observation			2424
R-square			0.343
Variable	Coef.	Std.Err.	t-ratio
Intercept	12.7232	0.1029	123.65
Has a bicycle (0/1)	0.1075	0.0241	4.46
Has a boat (0/1)	0.2168	0.0399	5.43
Number of boys aged 7-14	-0.0297	0.0131	-2.27
Has a car (0/1)	0.2723	0.0383	7.10
North Lowland Ecological Zone (0/1)	-0.0944	0.0208	-4.54
Age of head	0.0201	0.0044	4.56
Age of head squared	-0.0002	0.0000	-4.13
Head is Lao (0/1)	0.1565	0.0238	6.57
Head has an other ethnic groups (0/1)	0.1475	0.0257	5.73
Head is literate (0/1)	0.0675	0.0246	2.75
Head has lower secondary education (0/1)	0.0847	0.0258	3.28
Head has at least upper secondary education (0/1)	0.1448	0.0530	2.73
Number of kids aged 0-6	-0.0308	0.0118	-2.60
Household Size (in log)	-0.4854	0.0310	-15.65
Reside in Huaphanh Province (0/1)	-0.1457	0.0252	-5.76
Roof is in zinc (0/1)	0.0645	0.0188	3.43
Village has a market (0/1)	0.1515	0.0484	3.13

Strata 6: Rural Central Region

Number of observation			1960
R-square			0.412
Variable	Coef.	Std.Err.	t-ratio
Intercept	12.7232	0.0706	183.96
Has a car (0/1)	0.3795	0.0341	11.12
Uses wood as cooking fuel (0/1)	-0.0656	0.0261	-2.51
North Lowland Ecological Zone (0/1)	0.0757	0.0307	2.46
Vientiane Plain Ecological Zone (0/1)	0.1615	0.0382	4.23
Number of elderly individual	-0.0661	0.0220	-3.00
Has a fridge (0/1)	0.1045	0.0238	4.39
Number of girls aged 7-14	-0.0427	0.0149	-2.87
Age of head squared	3.38e-005	9.46e-006	3.58
Head has an other ethnic groups (0/1)	0.1454	0.0368	3.95
Head has upper secondary education (0/1)	0.0790	0.0389	2.03
Head has vocational training (0/1)	0.1886	0.0519	3.63
Household Size (in log)	-0.5055	0.0285	-17.73
Travel time to nearest district capital	-0.0003	9.8e-005	-3.16
Has a motorcycle (0/1)	0.1644	0.0267	6.16
Spouse is literate (0/1)	0.1100	0.0227	4.84
Village has road access (0/1)	0.1825	0.0414	4.41
Wall is in "other" material (0/1)	-0.0673	0.0259	-2.60

Strata 7: Rural Southern Region

Number of observation			1358
R-square			0.485
Variable	Coef.	Std.Err.	t-ratio
Intercept	13.4594	0.0846	159.13
Has a bicycle (0/1)	0.0675	0.0369	1.83
Has a car (0/1)	0.3617	0.0629	5.75
Village elevation (avg. in meters)	-0.0025	0.0004	-5.79
Village elevation (min. in meters)	0.0029	0.0005	6.35
Floor in ceramic (0/1)	0.1715	0.0704	2.44
Floor in concrete (0/1)	0.1690	0.0477	3.54
Head work in public sector (0/1)	0.1695	0.0644	2.63
Head has no education (0/1)	-0.1911	0.0421	-4.54
Head has some primary education (0/1)	-0.0901	0.0389	-2.32
Head has upper secondary education (0/1)	0.1532	0.0653	2.35
Number of kids aged 0-6	-0.0454	0.0191	-2.38
Household Size (in log)	-0.7240	0.0522	-13.87
Number of prime-age male	0.0740	0.0203	3.64
Has a motorcycle (0/1)	0.1454	0.0373	3.90
Reside in Saravane Province (0/1)	-0.2864	0.0318	-9.01
Has a roof in zinc (0/1)	0.0981	0.0472	2.08
Has improved sanitation facility (0/1)	0.1432	0.0357	4.02
Village has water supply (0/1)	0.1280	0.0507	2.52

Appendix 5: Administrative Unit Labels

#	Name
Vientiane Capital	
101	Chanthabuly
102	Sikhottabong
103	Xaysetha
104	Sisattanak
105	Naxaithong
106	Xaythany
107	Hadxaifong
108	Sangthong
109	Mayparkngum
Phongsaly Province	
201	Phongsaly
202	May
203	Khua
204	Samphanh
205	Boon neua
206	Nhot ou
207	Boontai
Luang Namtha Province	
301	Namtha
302	Sing
303	Long
304	Viengphoukha
305	Nalae

#	Name
Oudomxay Province	
401	Xay
402	La
403	Namor
404	Nga
405	Beng
406	Hoon
407	Pakbeng
Bokeo Province	
501	Huoixai
502	Tonpheung
503	Meung
504	Pha oudom
505	Paktha
Luang Prabang Province	
601	Luangprabang
602	Xieng ngeun
603	Nan
604	Park ou
605	Nambak
606	Ngoi
607	Pak xeng
608	Phonxay
609	Chomphet
610	Viengkham
611	Phoukhoune
612	Phonthong

#	Name
Huaphanh Province	
701	Xamneua
702	Xiengkhor
703	Huim
704	Viengxay
705	Huameuang
706	Xamtay
707	Sopbao
708	Add
709	Kuane
710	Sone
Xayabury Province	
801	Xayabury
802	Khop
803	Hongsa
804	Ngeun
805	Xienghone
806	Phiang
807	Parklai
808	Kenethao
809	Botene
810	Thongmyxay
811	Xaysathan
Xiengkhuang Province	
901	Pek
902	Kham
903	Nonghed

#	Name
Xiengkhuang Province	
904	Khoune
905	Morkmay
906	Phoukoud
907	Phaxay
Vientiane Province	
1001	Phonhong
1002	Thoulakhom
1003	Keo oudom
1004	Kasy
1005	Vangvieng
1006	Feuang
1007	Xanakharm
1008	Mad
1009	Viengkham
1010	Hinherb
1013	Meun
Borikhamxay Province	
1101	Pakxane
1102	Thaphabath
1103	Pakkading
1104	Bolikhanh
1105	Khamkeuth
1106	Viengthong
1107	Xaychamphone

#	Name
Khammuane Province	
1201	Thakhek
1202	Mahaxay
1203	Nongbok
1204	Hinboon
1205	Nhommalath
1206	Bualapha
1207	Nakai
1208	Xebangfay
1209	Xaybuathong
1210	Khounkham
Savannakhet Province	
1301	Kaysone Phomvihane
1302	Outhoomphone
1303	Atsaphangthong
1304	Phine
1305	Sepone
1306	Nong
1307	Thapangthong
1308	Songkhone
1309	Champhone
1310	Xonbuly
1311	Xaybuly
1312	Vilabuly
1313	Atsaphone
1314	Xayphoothong
1315	Phalanxay

#	Name
Saravane Province	
1401	Saravane
1402	Ta oi
1403	Toomlarn
1404	Lakhonepheng
1405	Vapy
1406	Khongxedone
1407	Lao ngarm
1408	Samuoi
Sekong Province	
1501	Lamarm
1502	Kaleum
1503	Dakcheung
1504	Thateng
Champasack Province	
1601	Pakse
1602	Sanasomboon
1603	Bachiangchaleunsook
1604	Paksxong
1605	Pathoomphone
1606	Phonthong
1607	Champasack
1608	Sukhuma
1609	Moonlapamok
1610	Khong

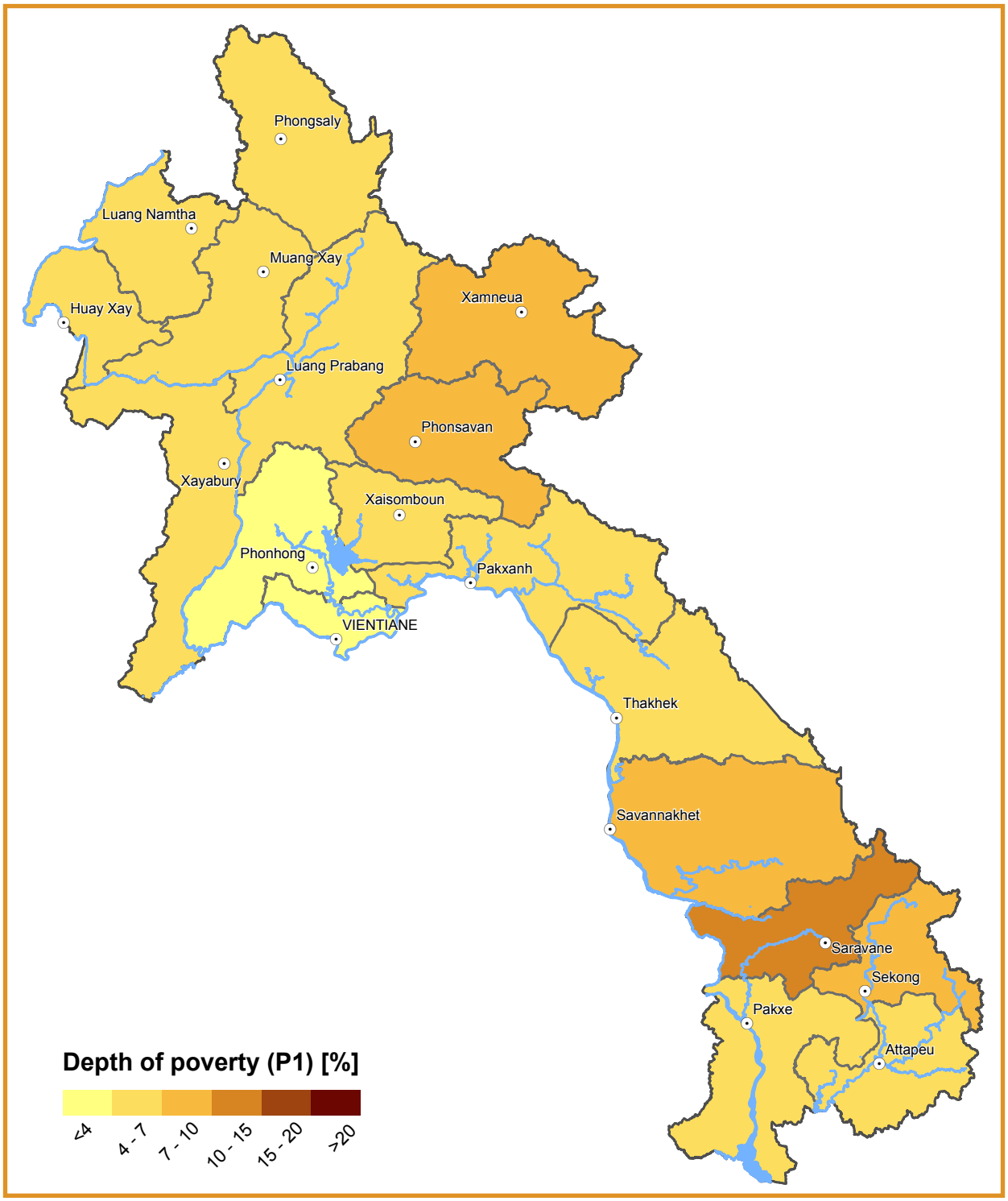
#	Name
Attapeu Province	
1701	Xaysetha
1702	Samakkhixay
1703	Sanamxay
1704	Sanxay
1705	Phouvong

#	Name
Saysomboune Province	
1801	Anouvong
1802	Thathom
1803	Longcheng
1804	Home
1805	Longsane

Appendix 6: Monetary and Non-Monetary Maps at Different Administrative Levels

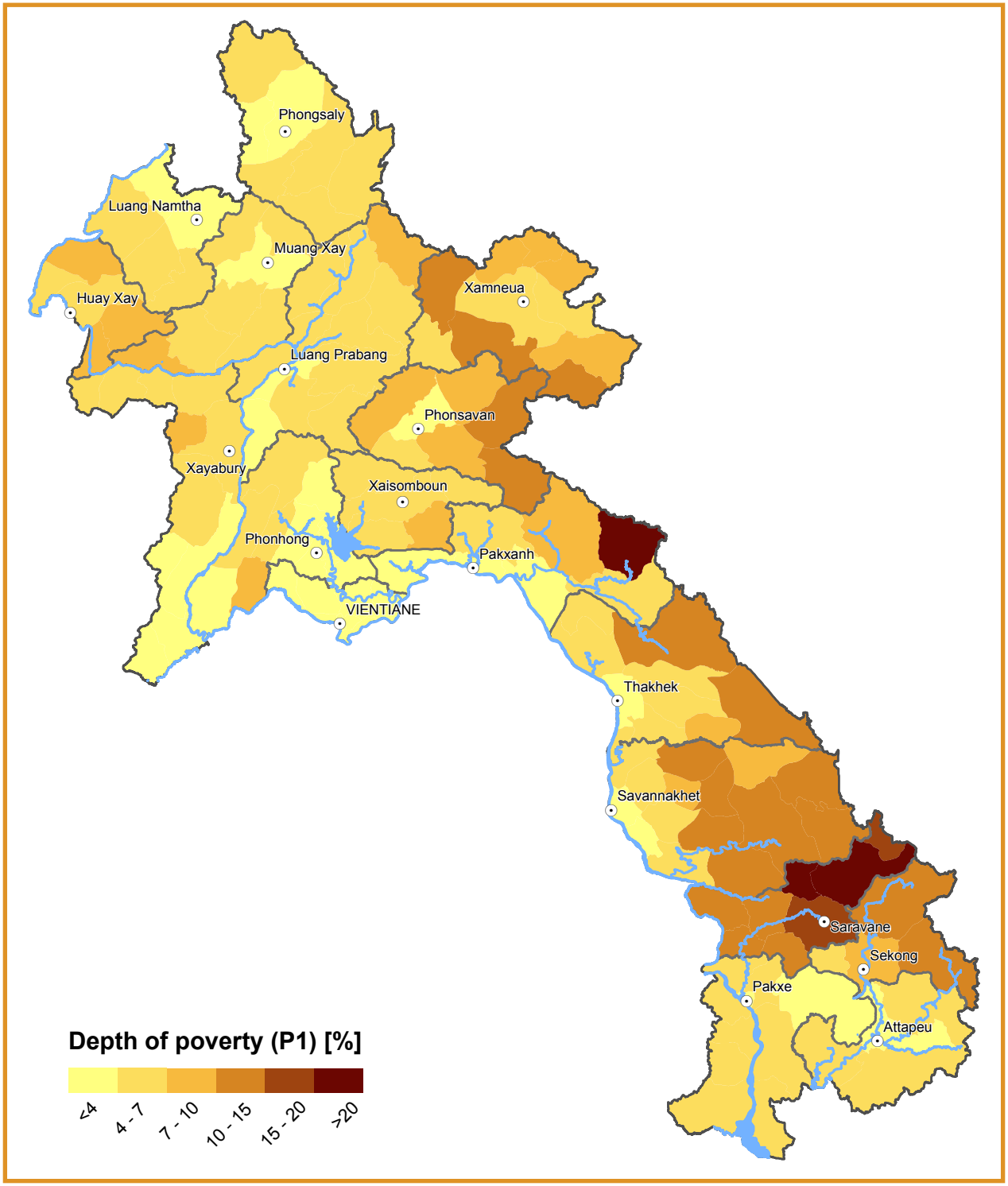
Map 3: Poverty Gap Index (P_1)

A. Province



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

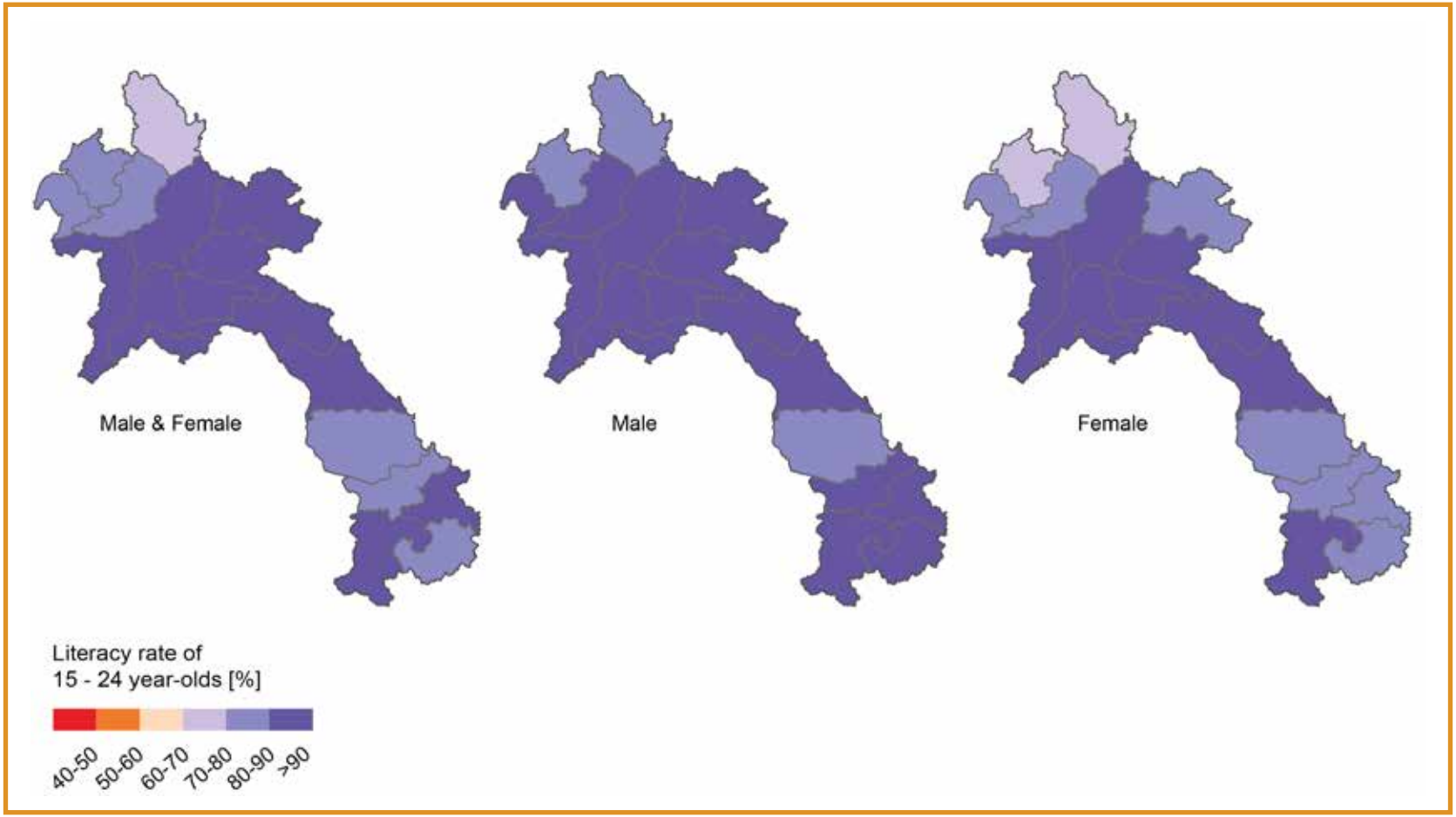
B. District



Sources: Authors' calculation based on 2012/13 LECS-5 and 2015 Lao PDR Census

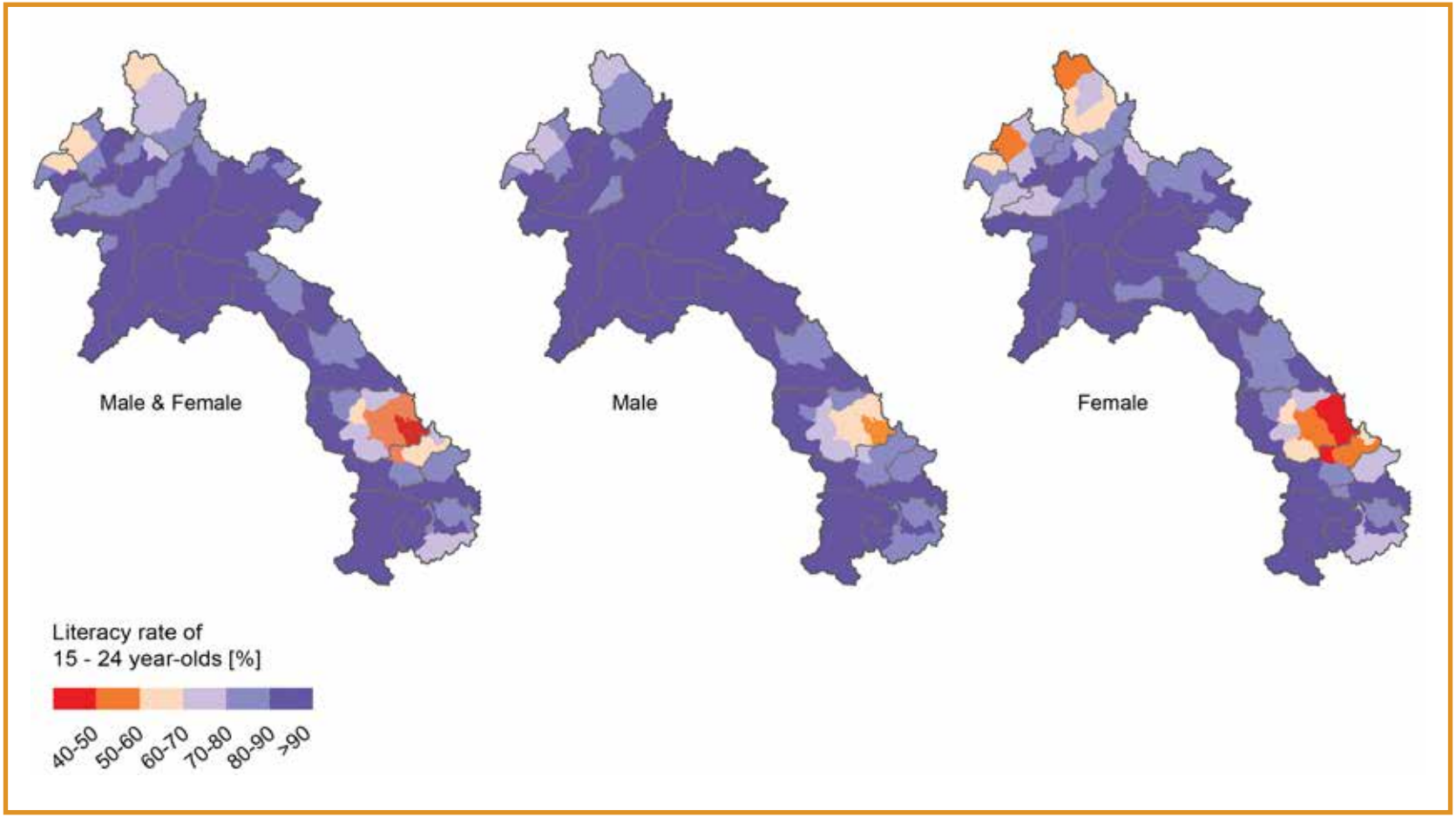
Map 4: Youth Literacy Rate, 15-24 Age Group [3] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

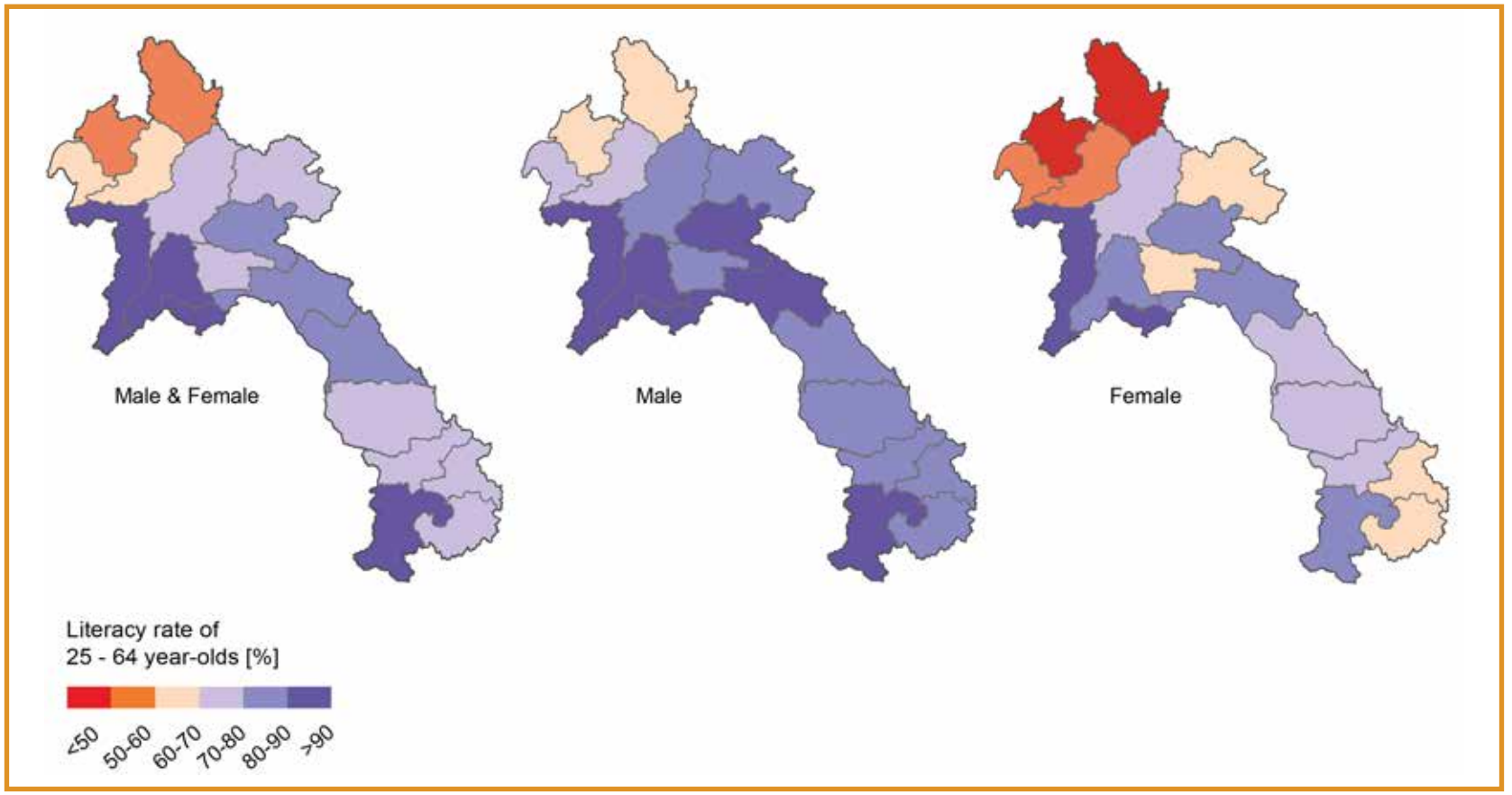
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

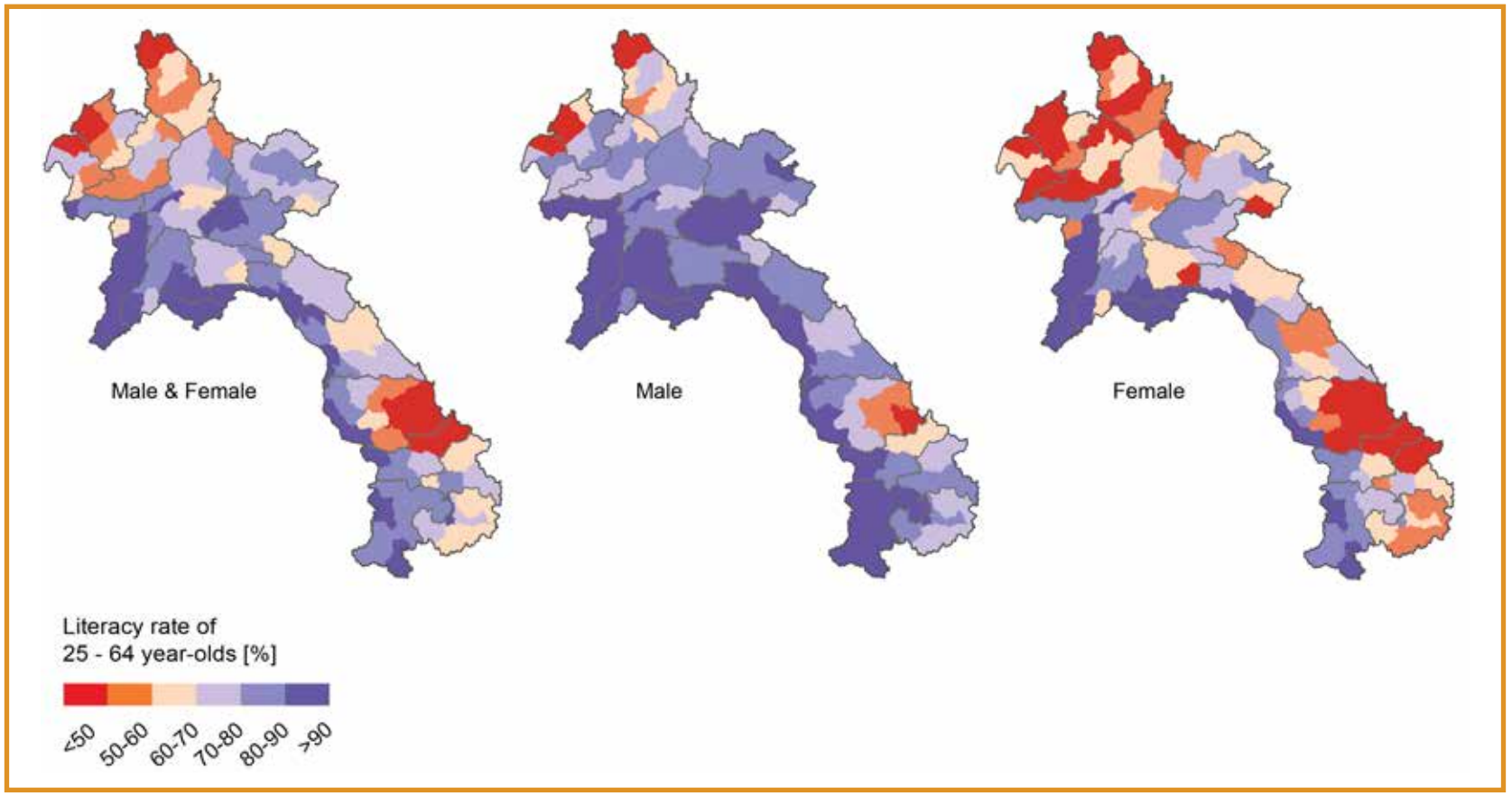
Map 5: Literacy Rate, 25-64 Age Group [4] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

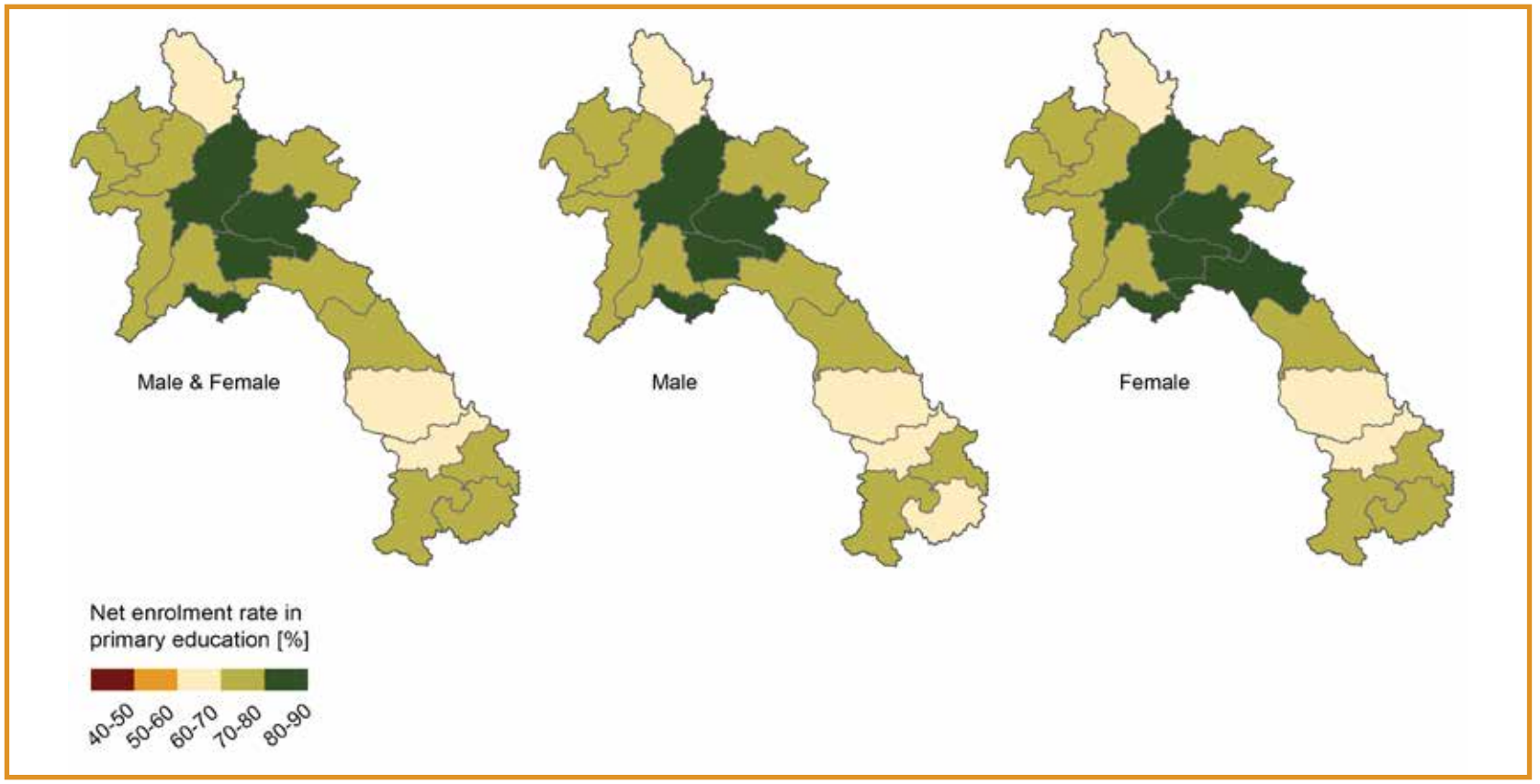
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

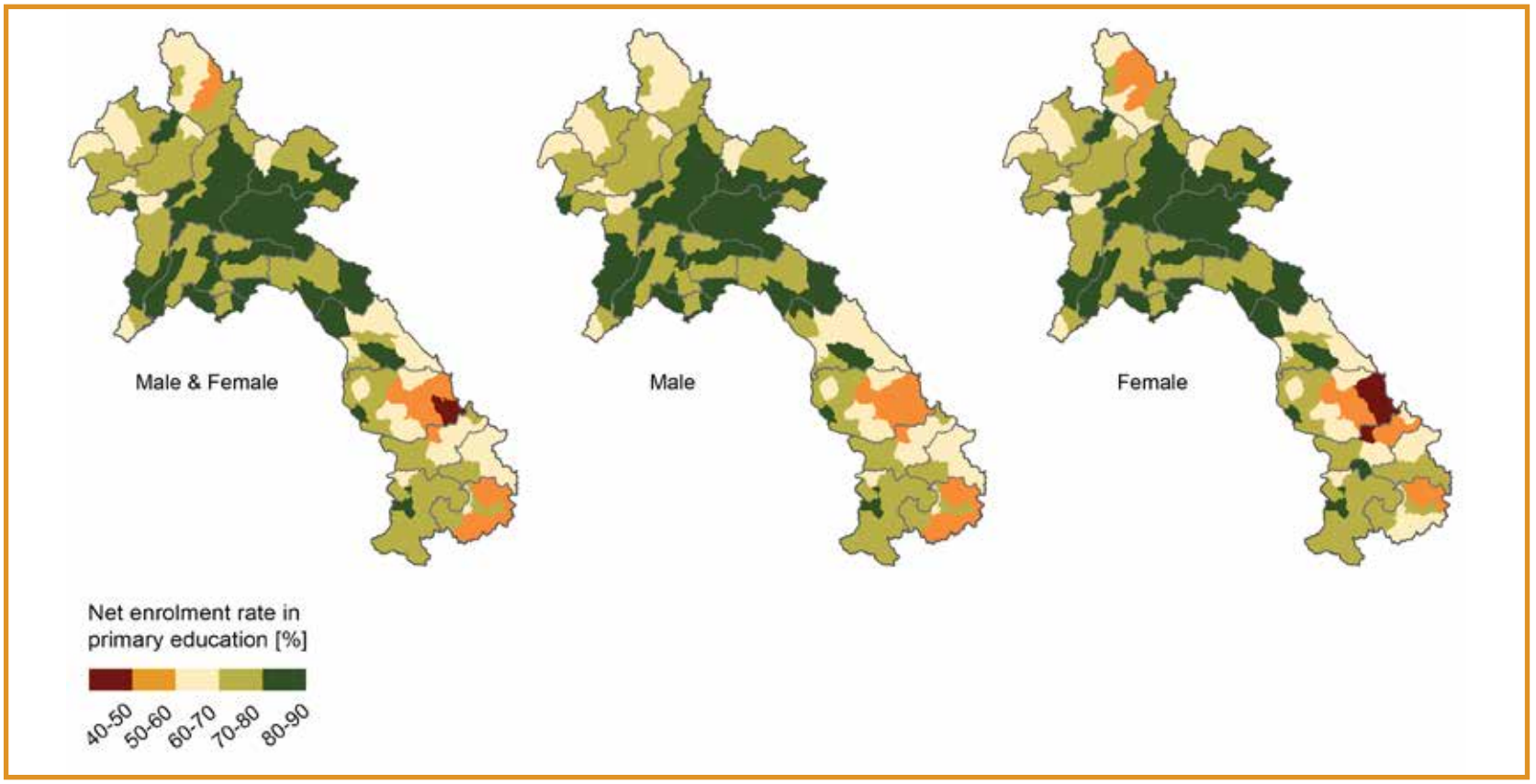
Map 6: Net School Enrolment in Primary [5] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

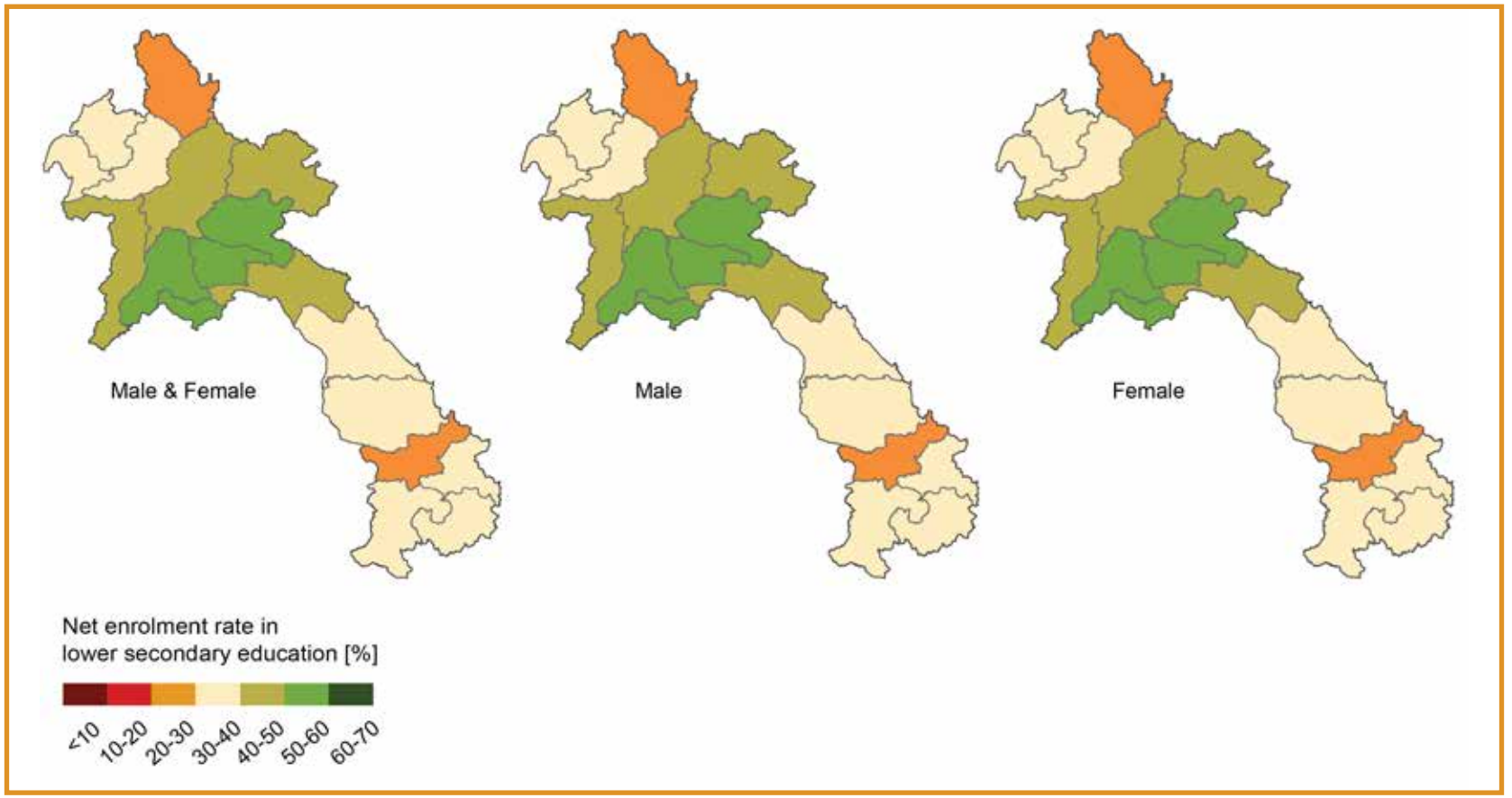
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

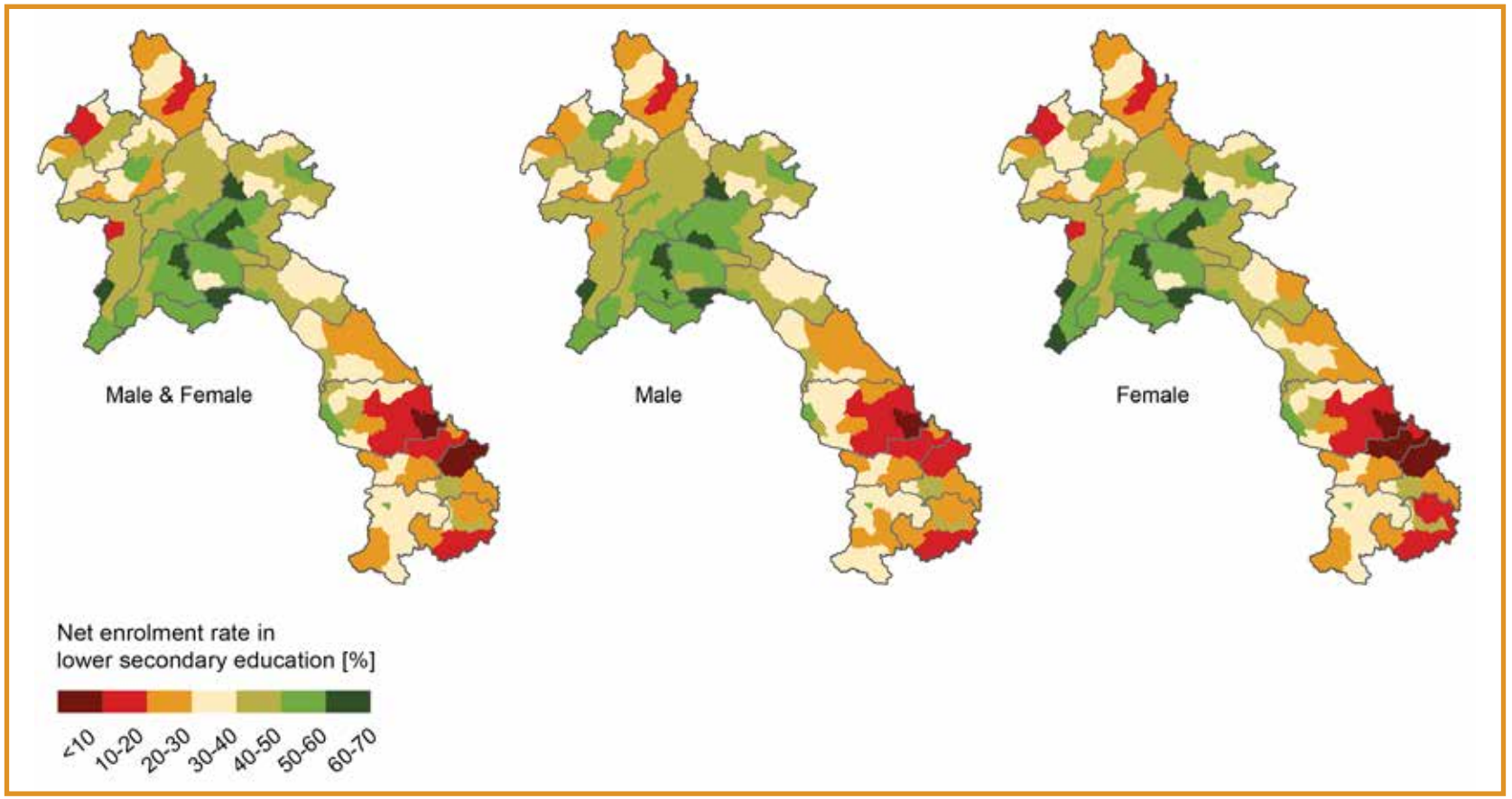
Map 7: Net School Enrolment in Lower Secondary [6] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

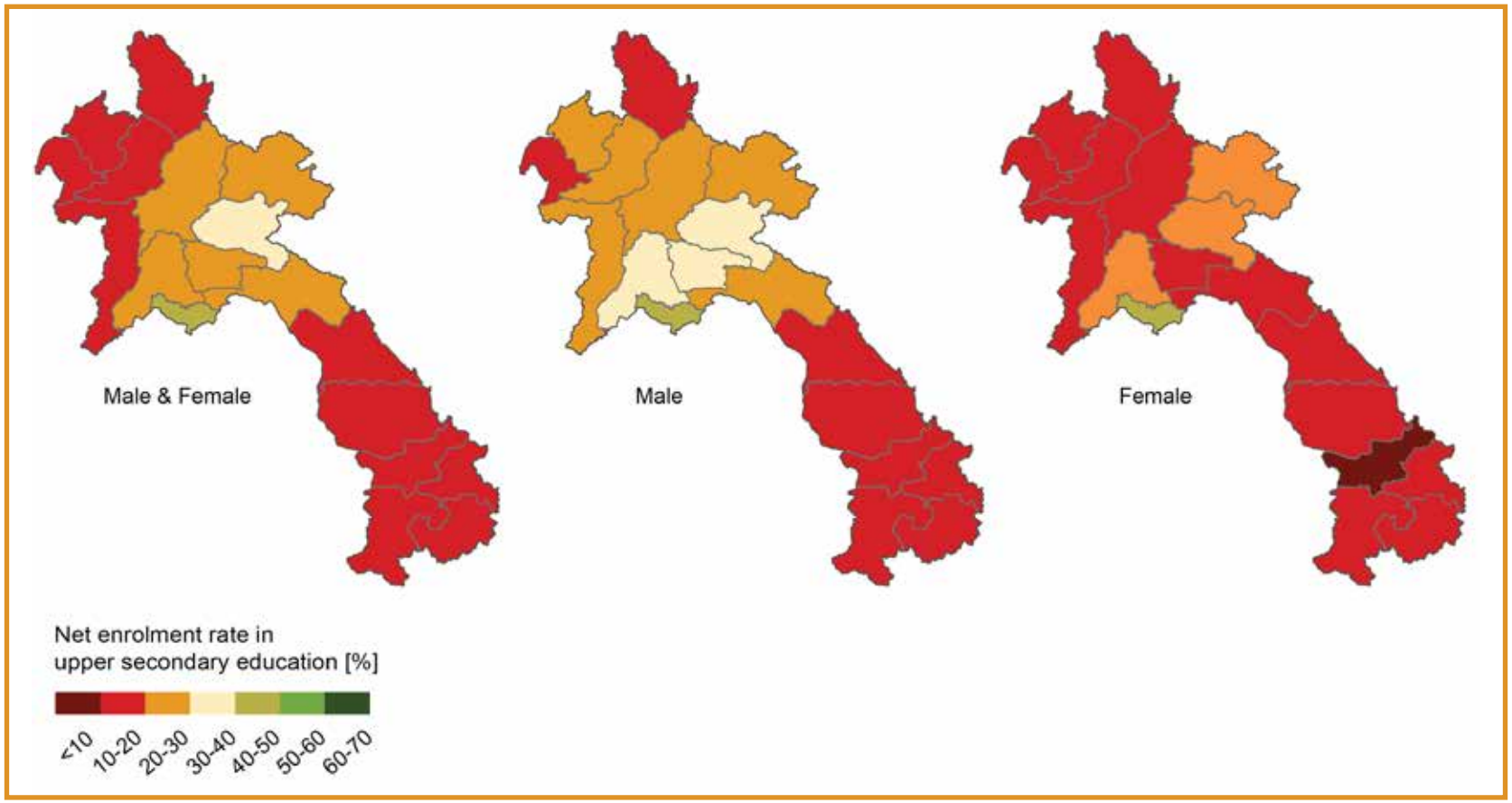
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

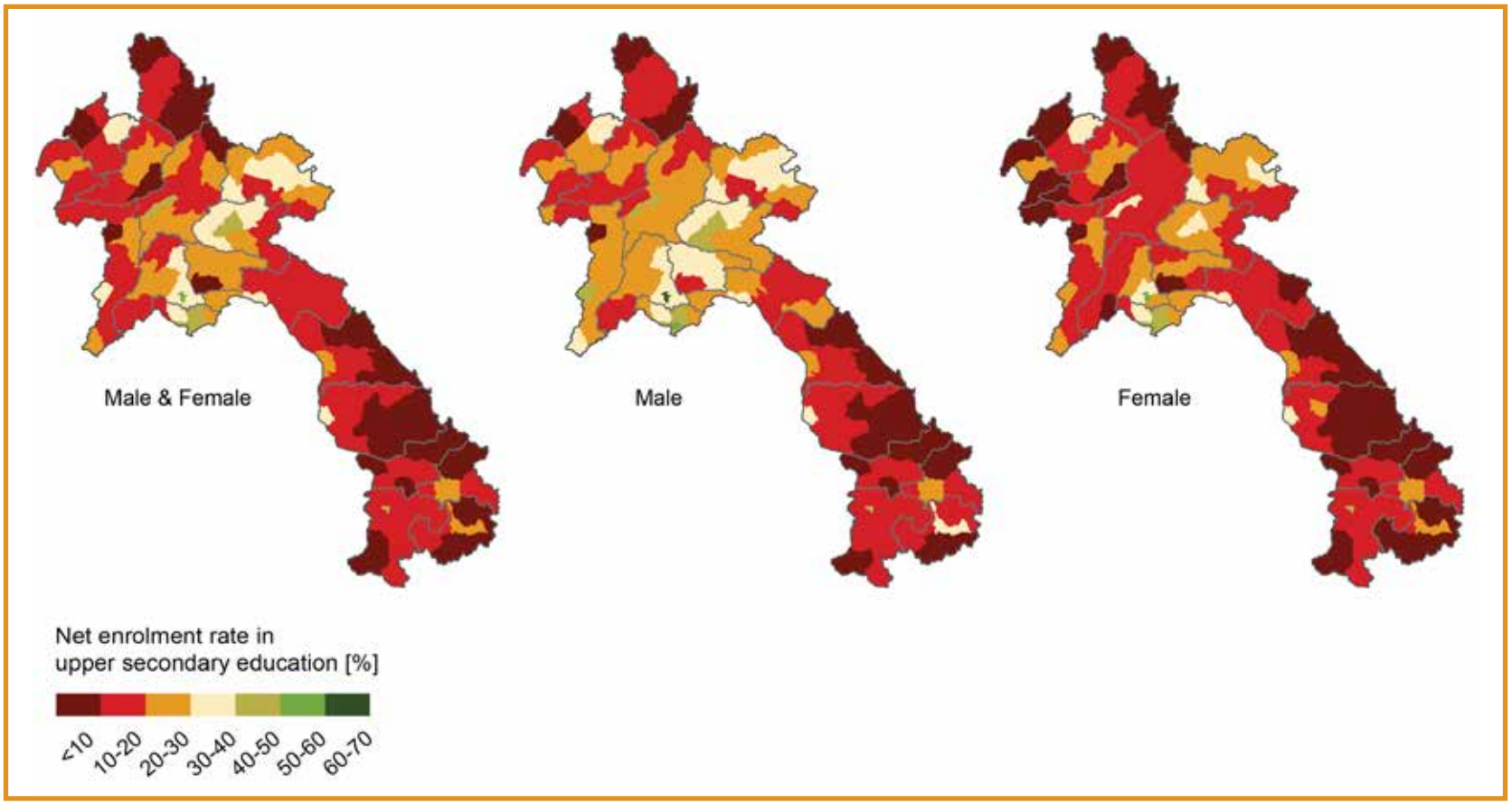
Map 8: Net School Enrolment in Upper Secondary [7] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

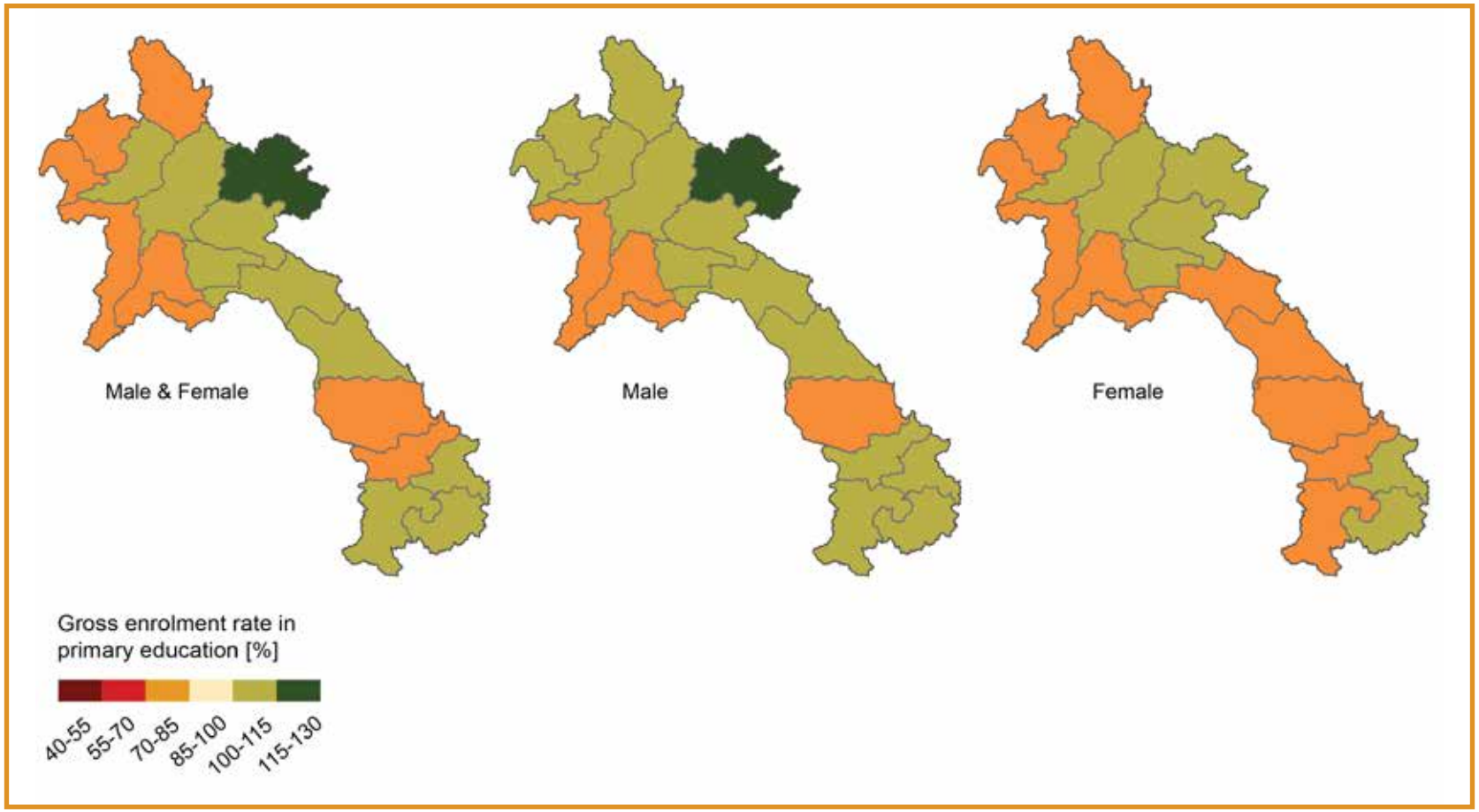
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

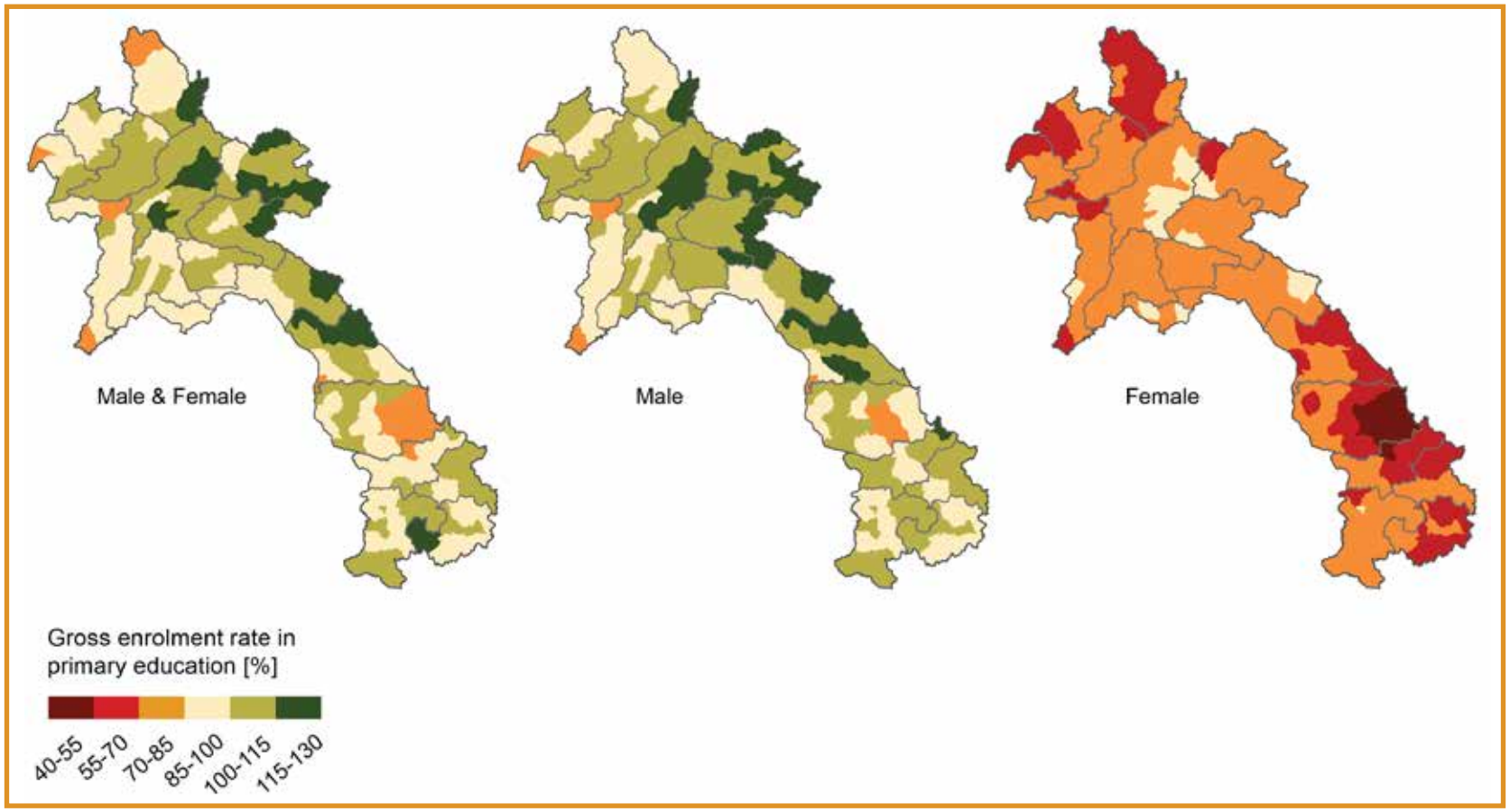
Map 9: Gross School Enrolment in Primary [8] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

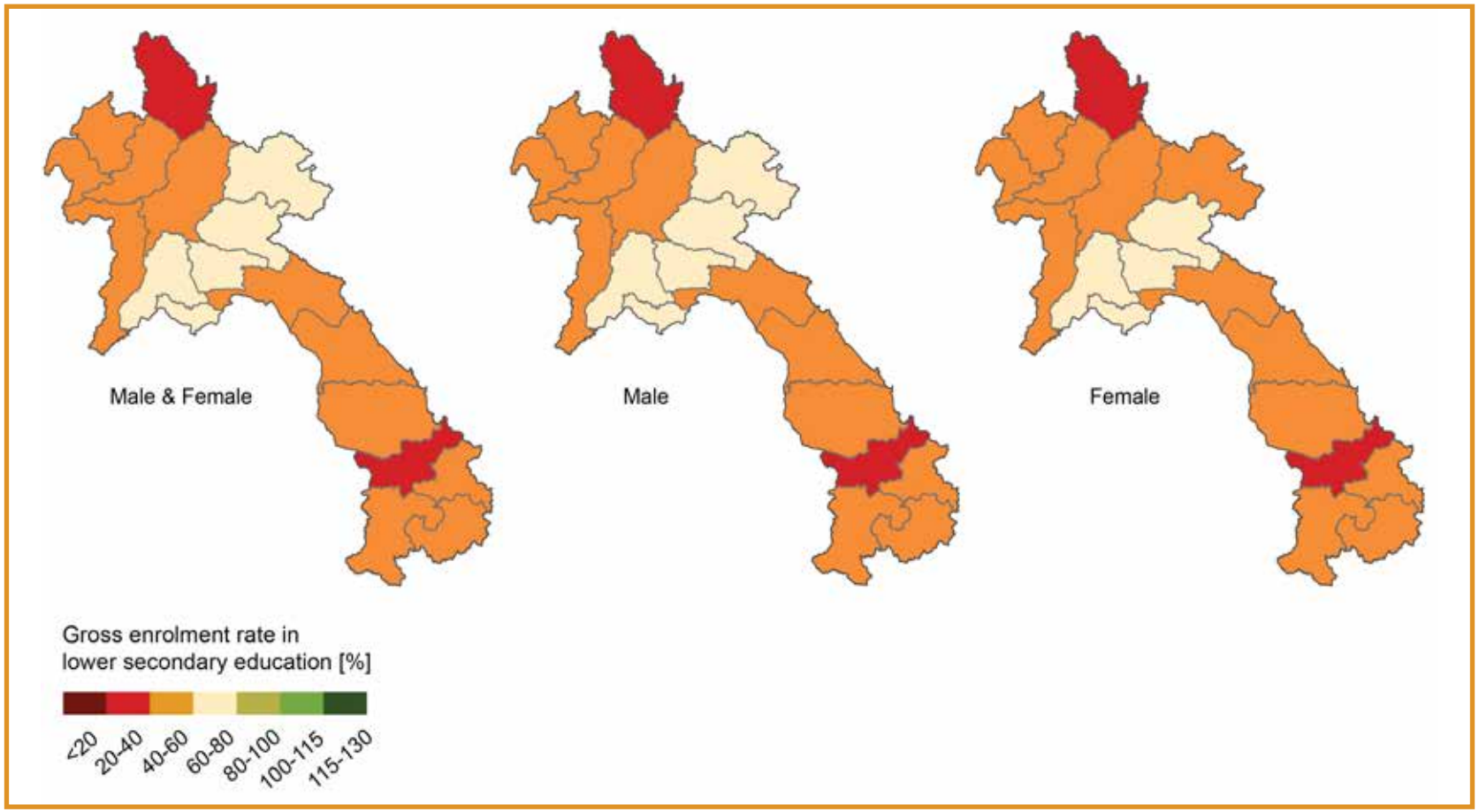
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

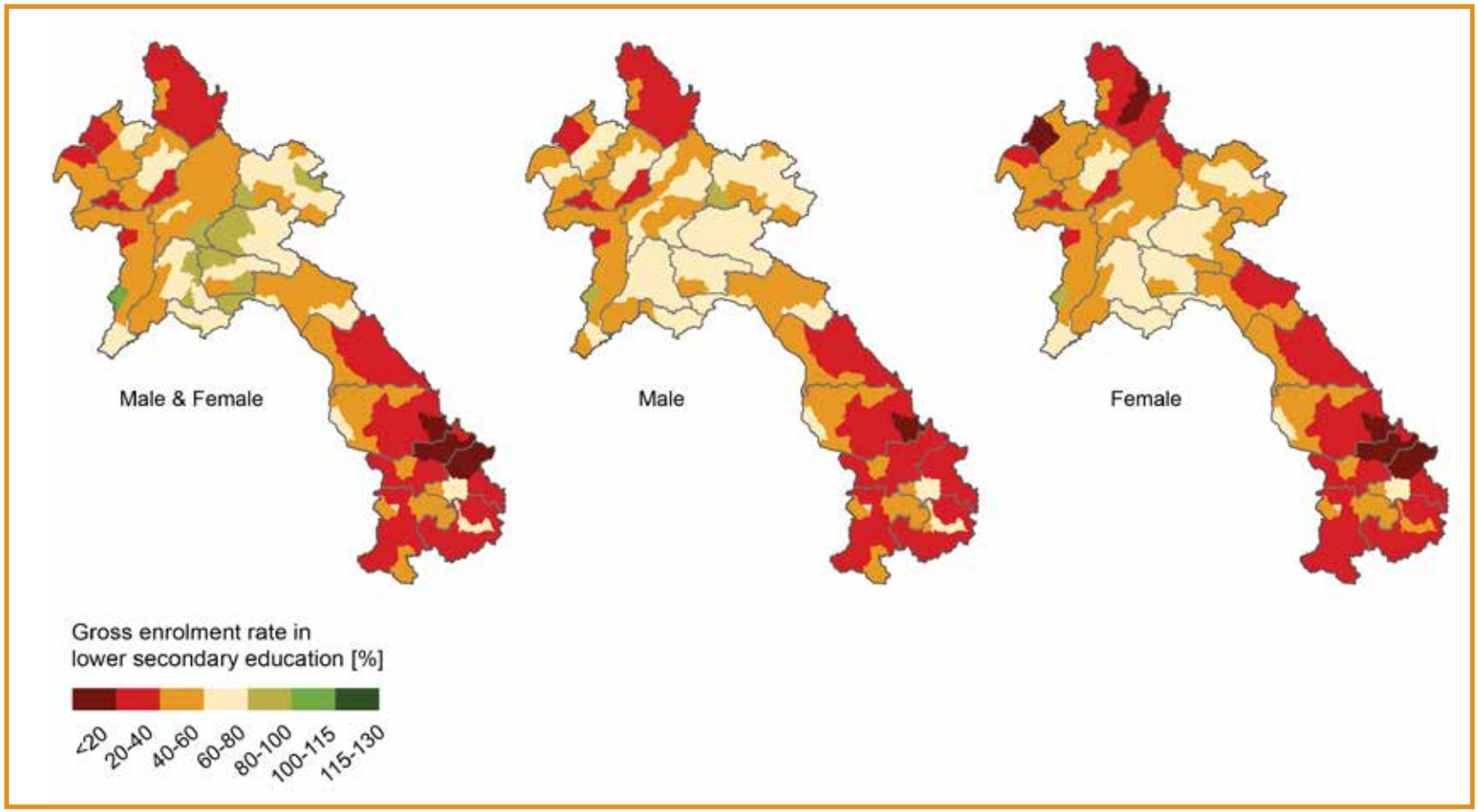
Map 10: Gross School Enrolment in Lower Secondary [9] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

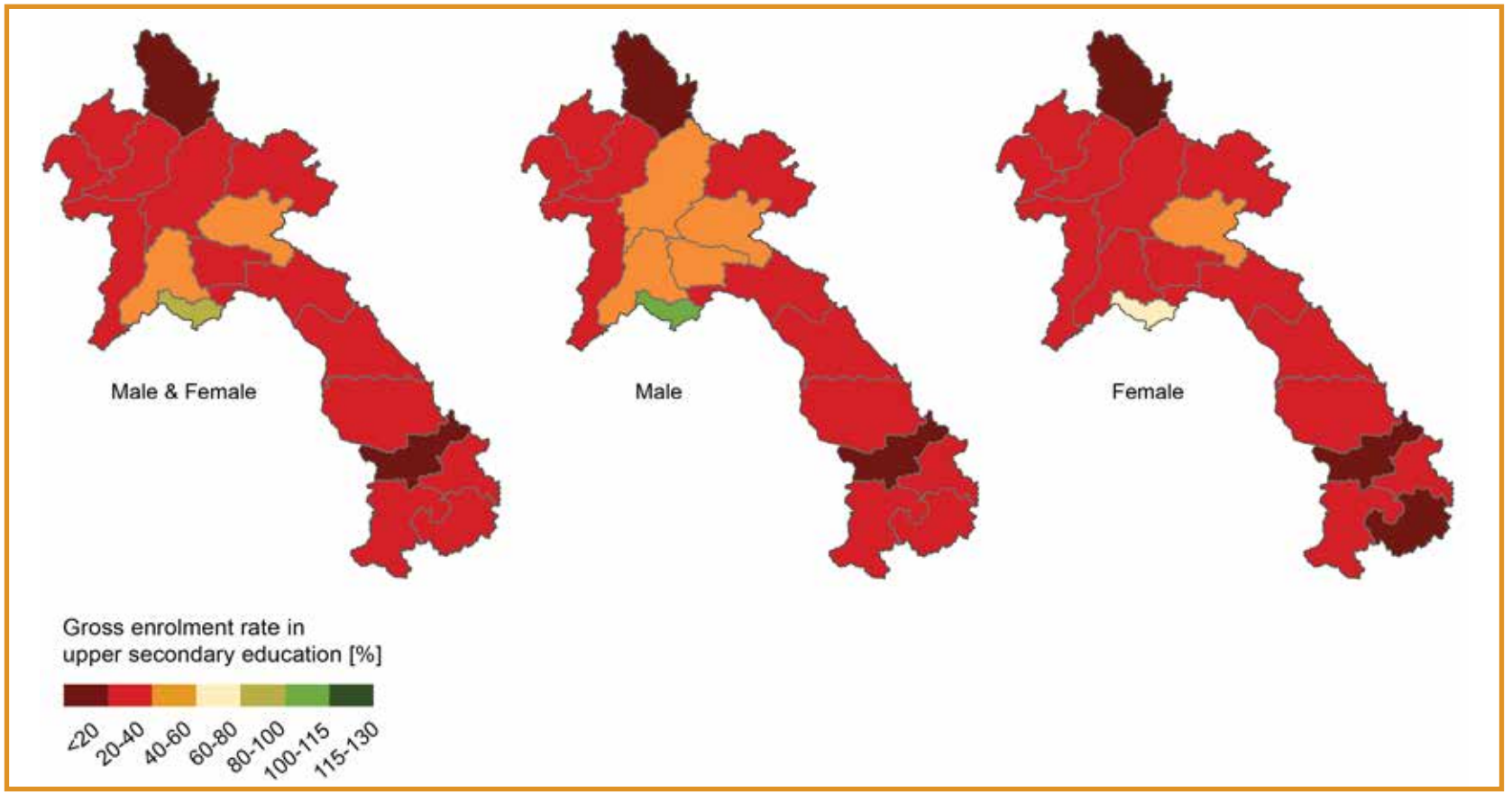
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

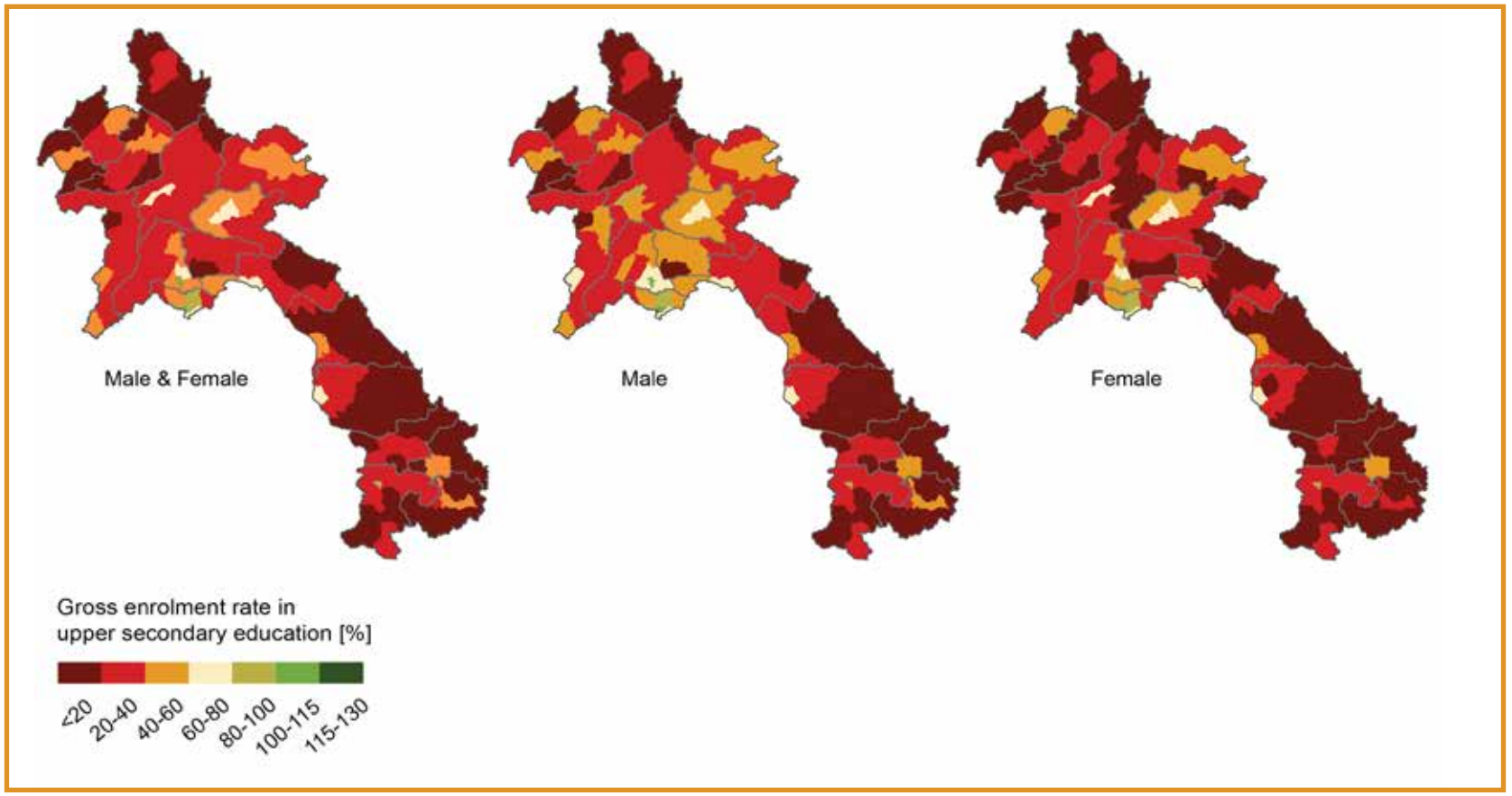
Map 11: Gross School Enrolment in Upper Secondary [10] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

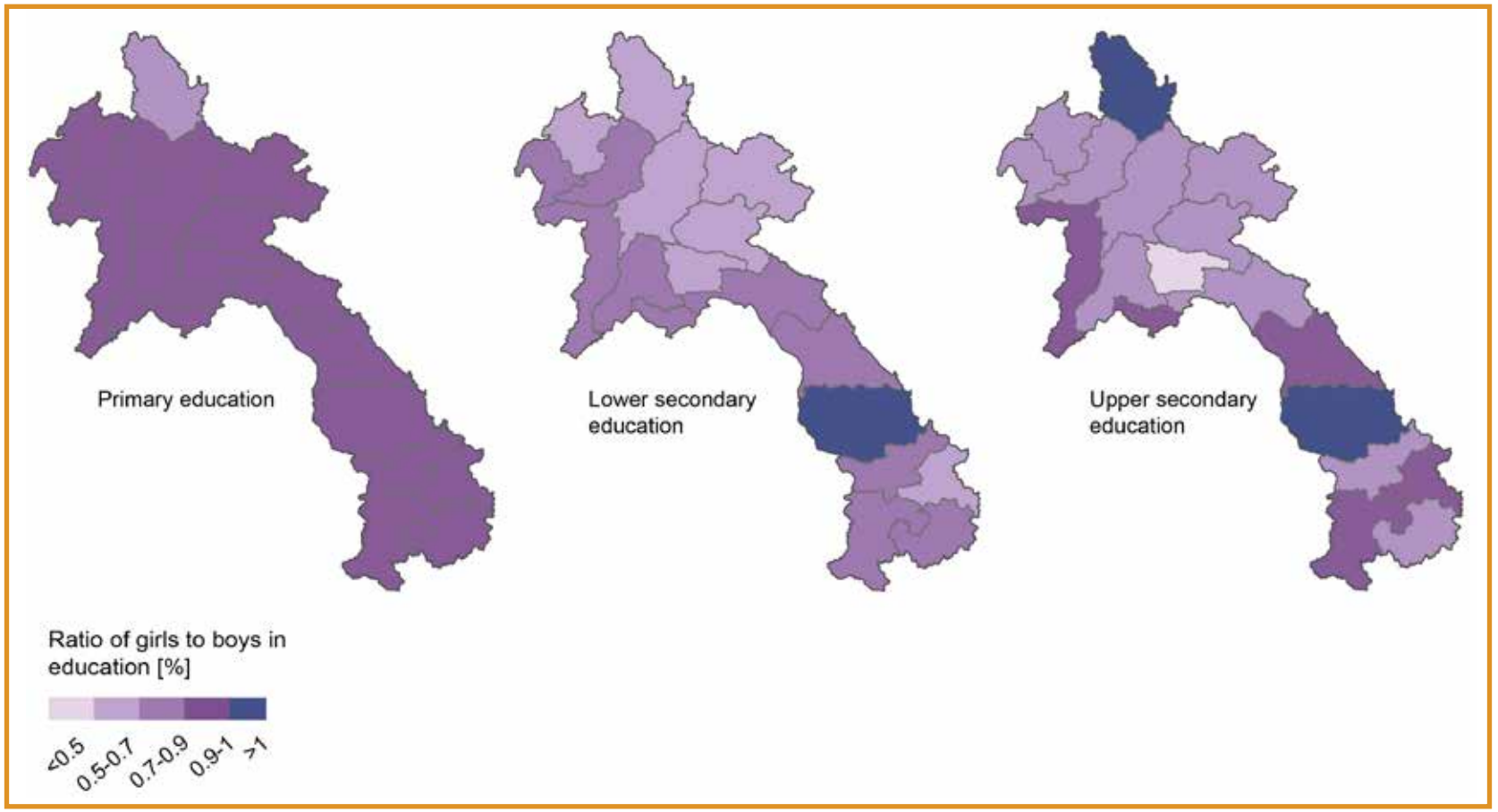
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

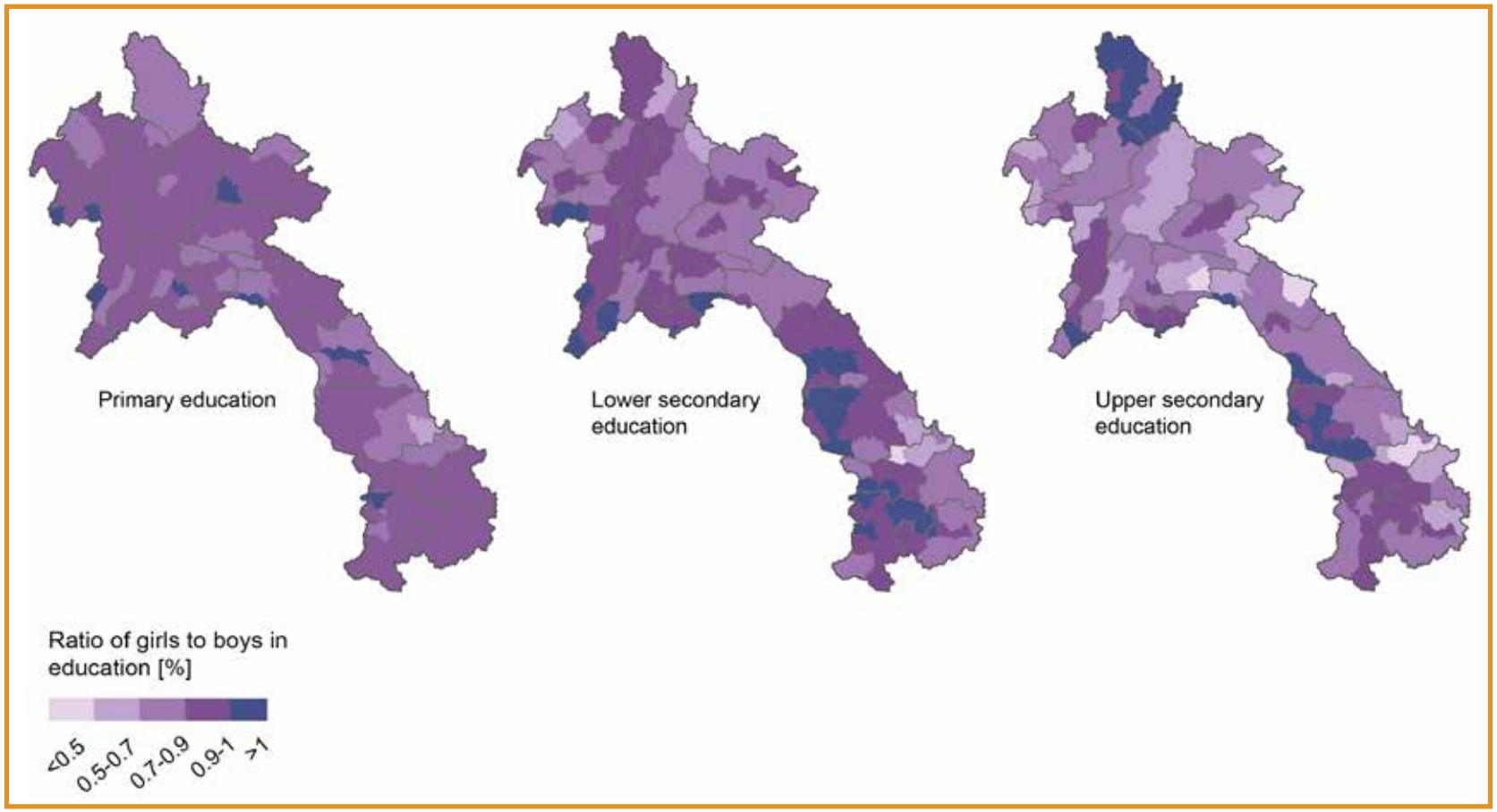
Map 12: Girl-to-Boy Ratio at Primary [11], Lower Secondary [12] and Upper Secondary [13] School

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

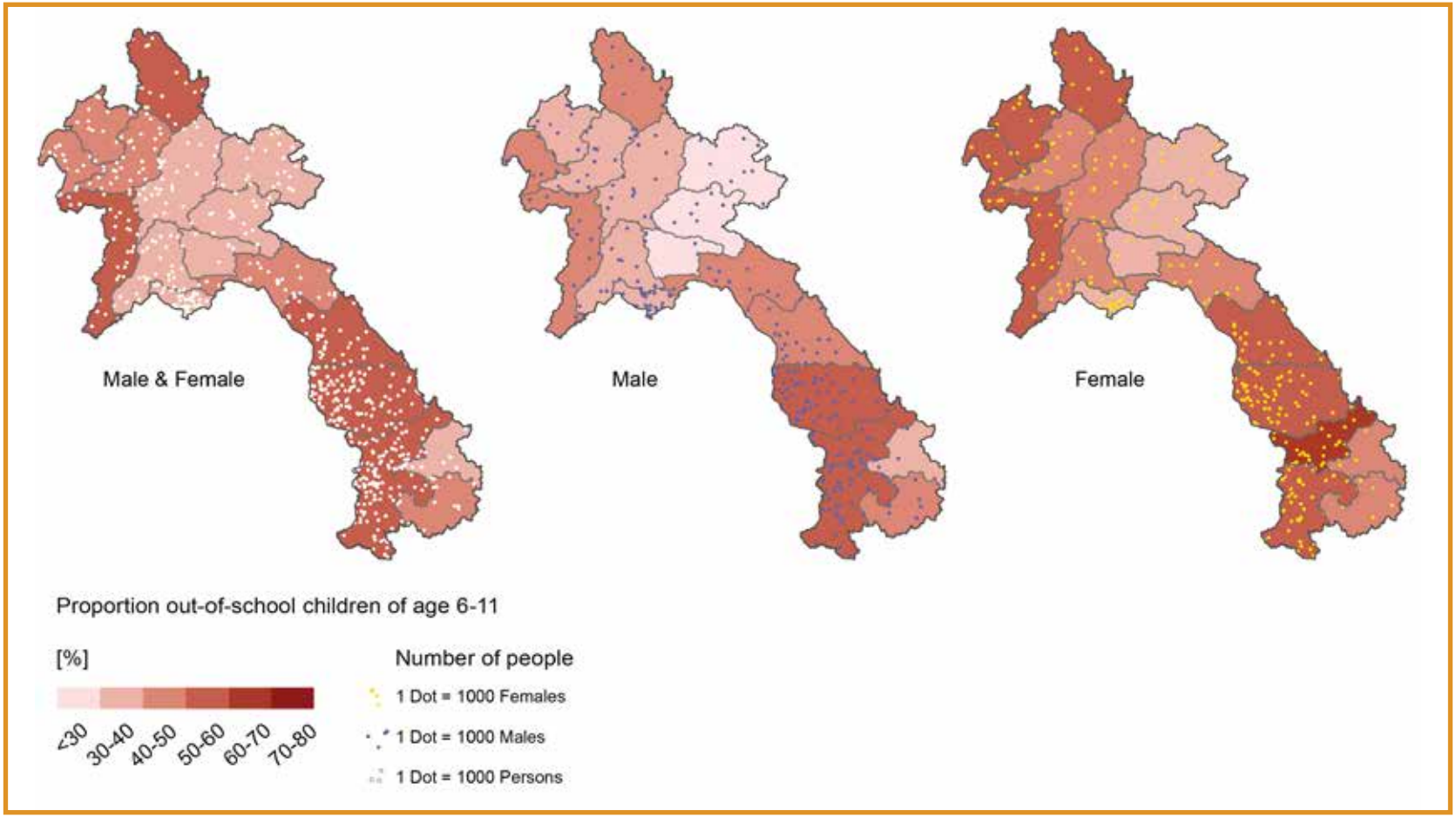
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

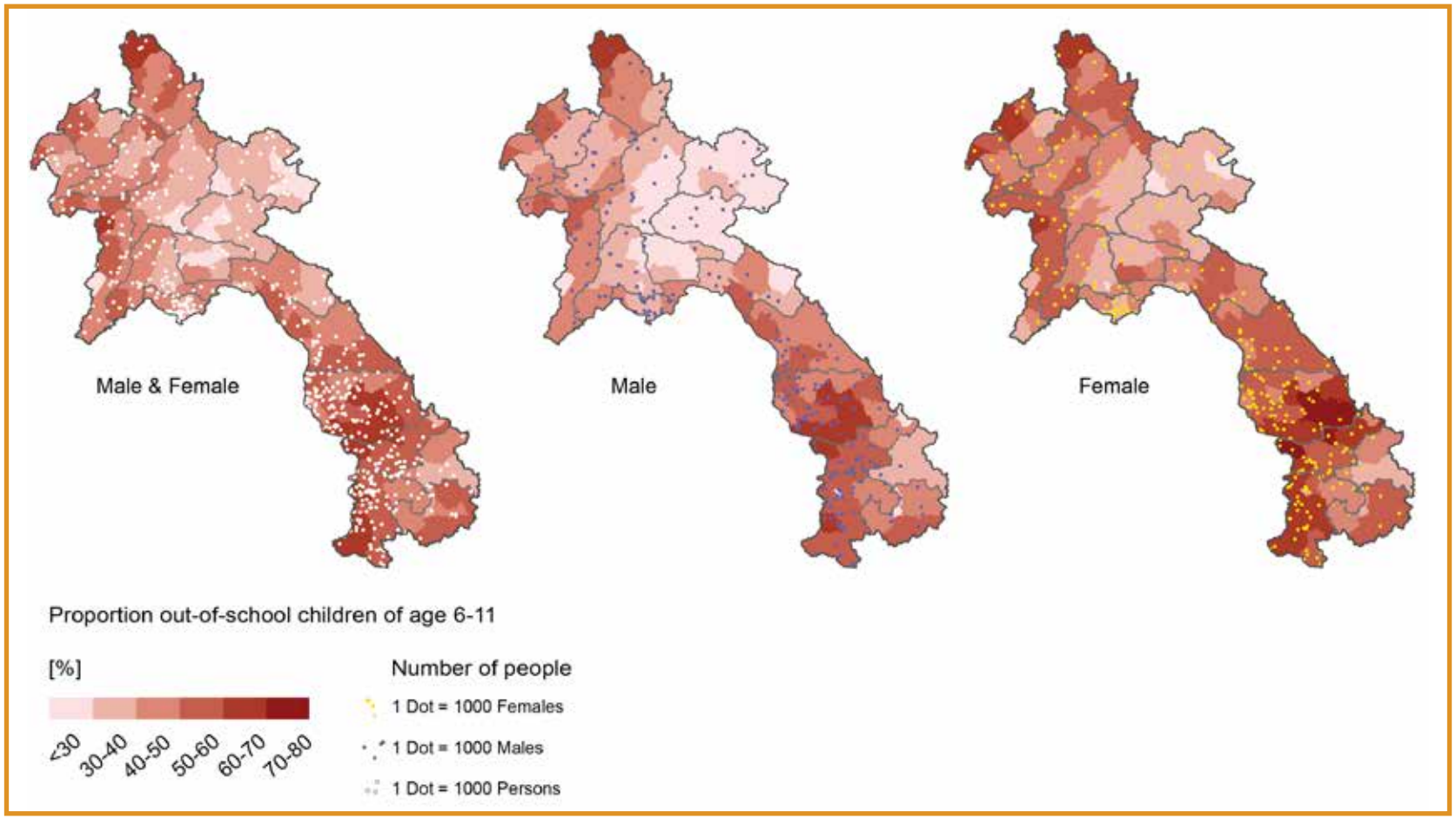
Map 13: Proportion [14] and number [15] of out-of-school 6-11 year-old children (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

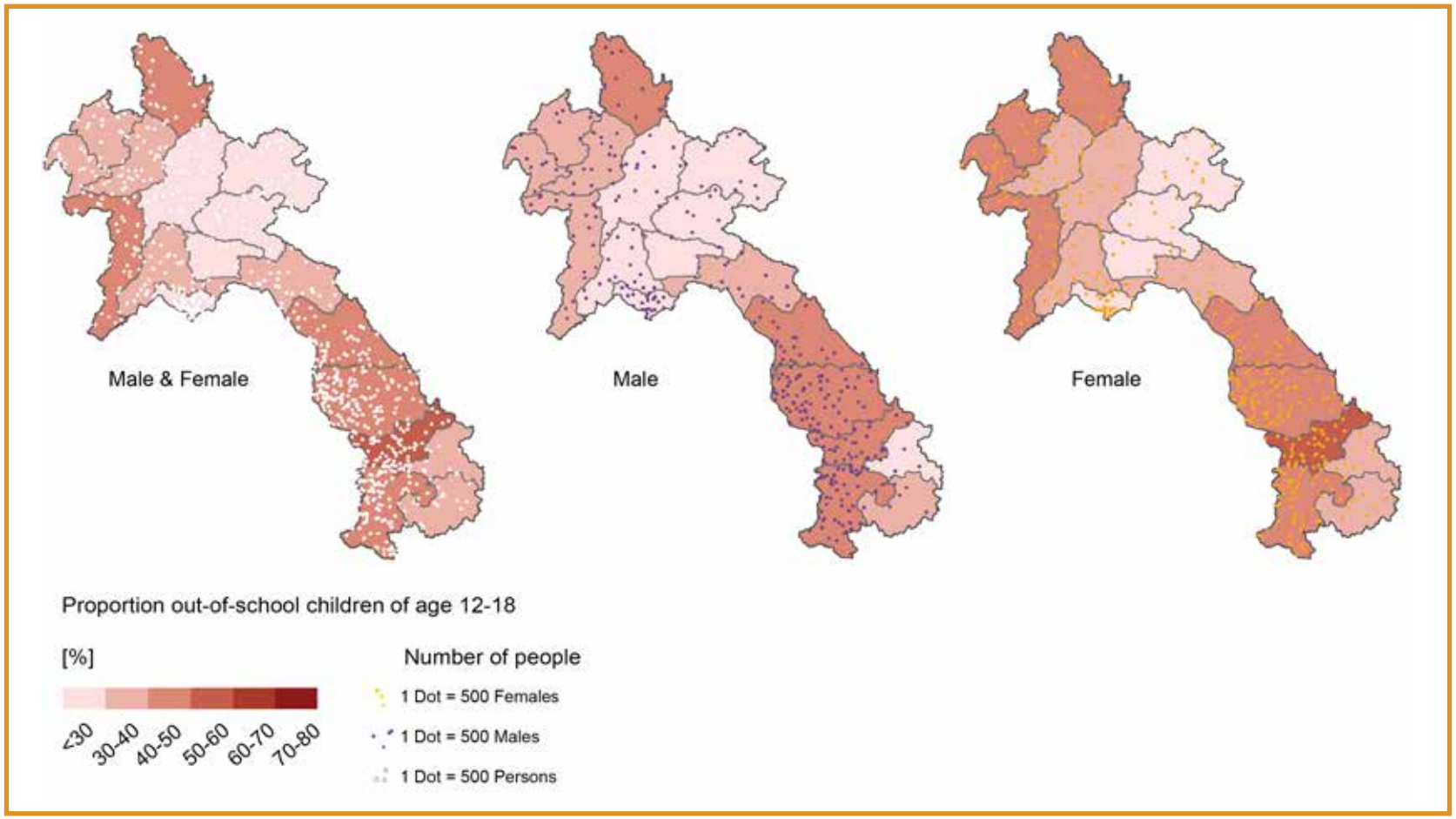
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

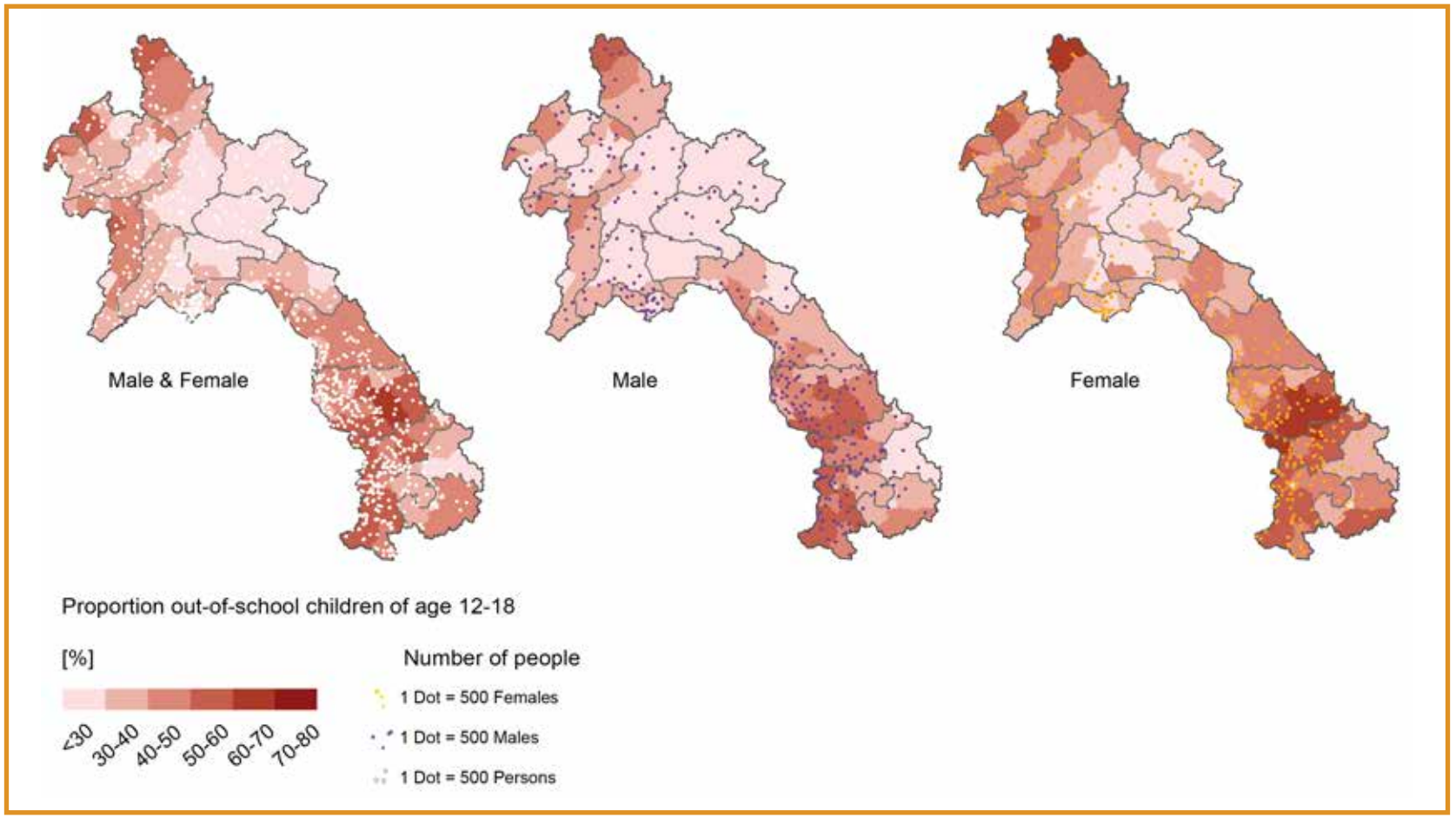
Map 14: Proportion [16] and number [17] of out-of-school 12-18 year-old children (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

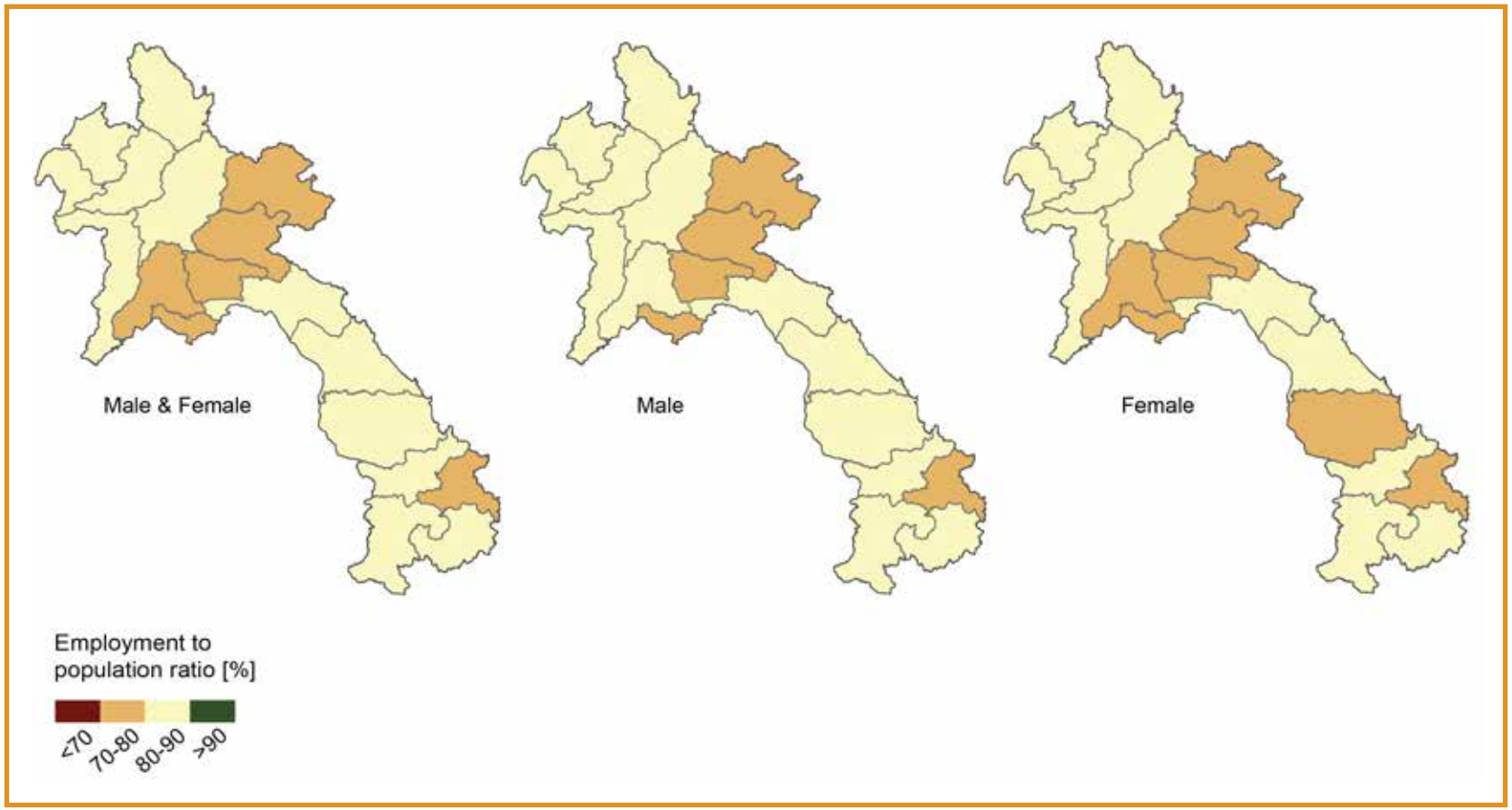
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

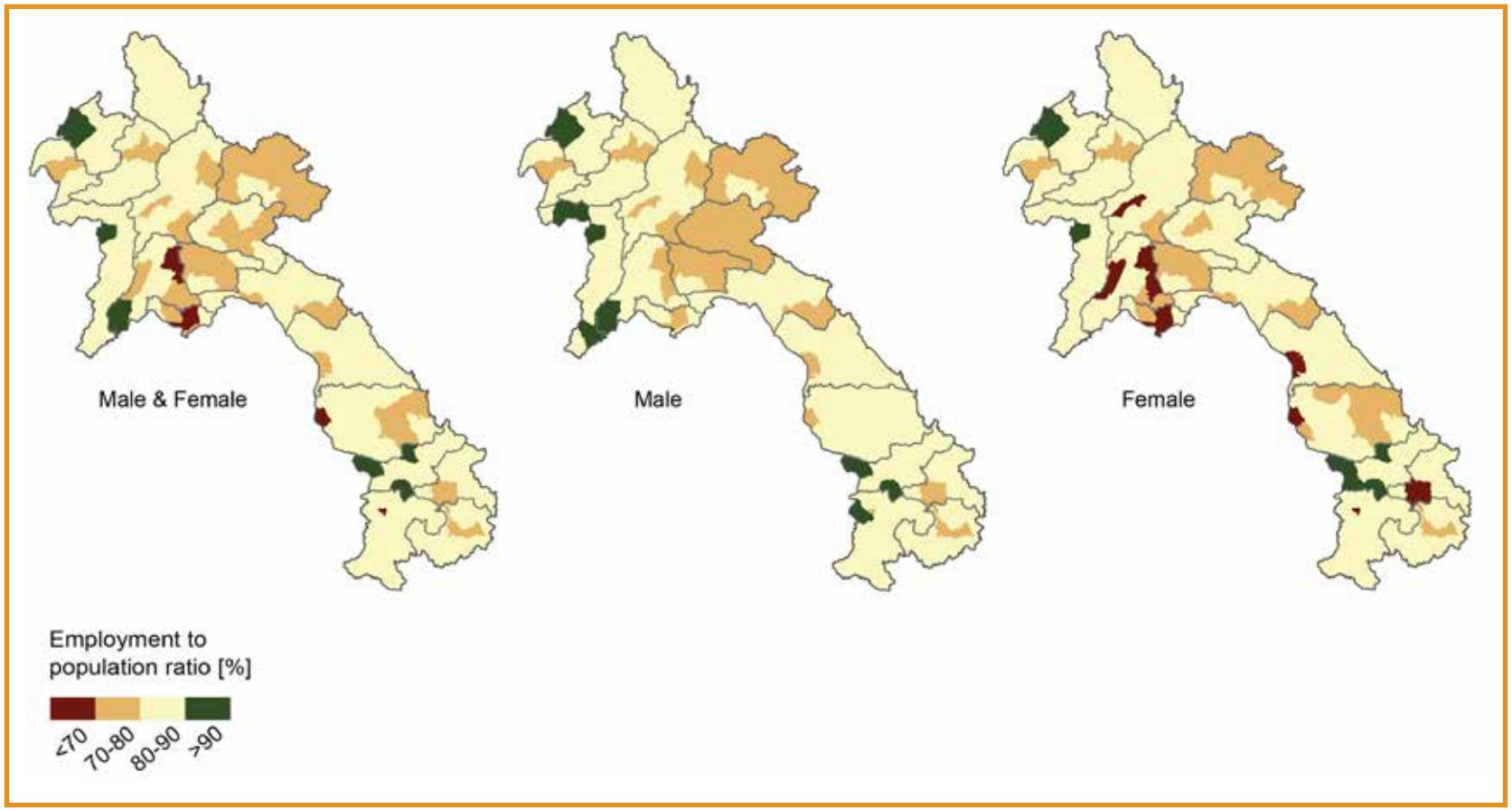
Map 15: Employment rate for the 15-64 age group [18] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

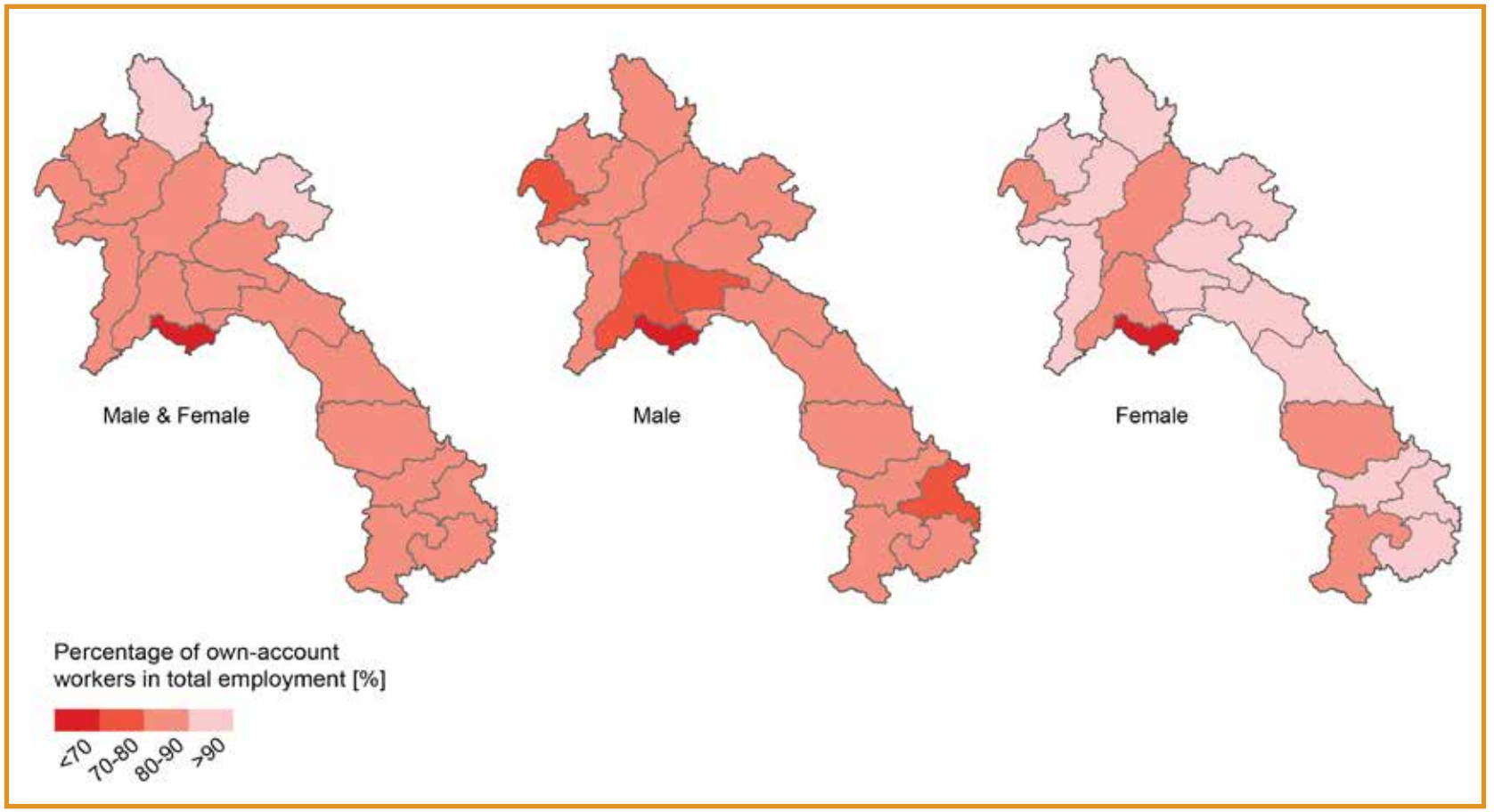
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

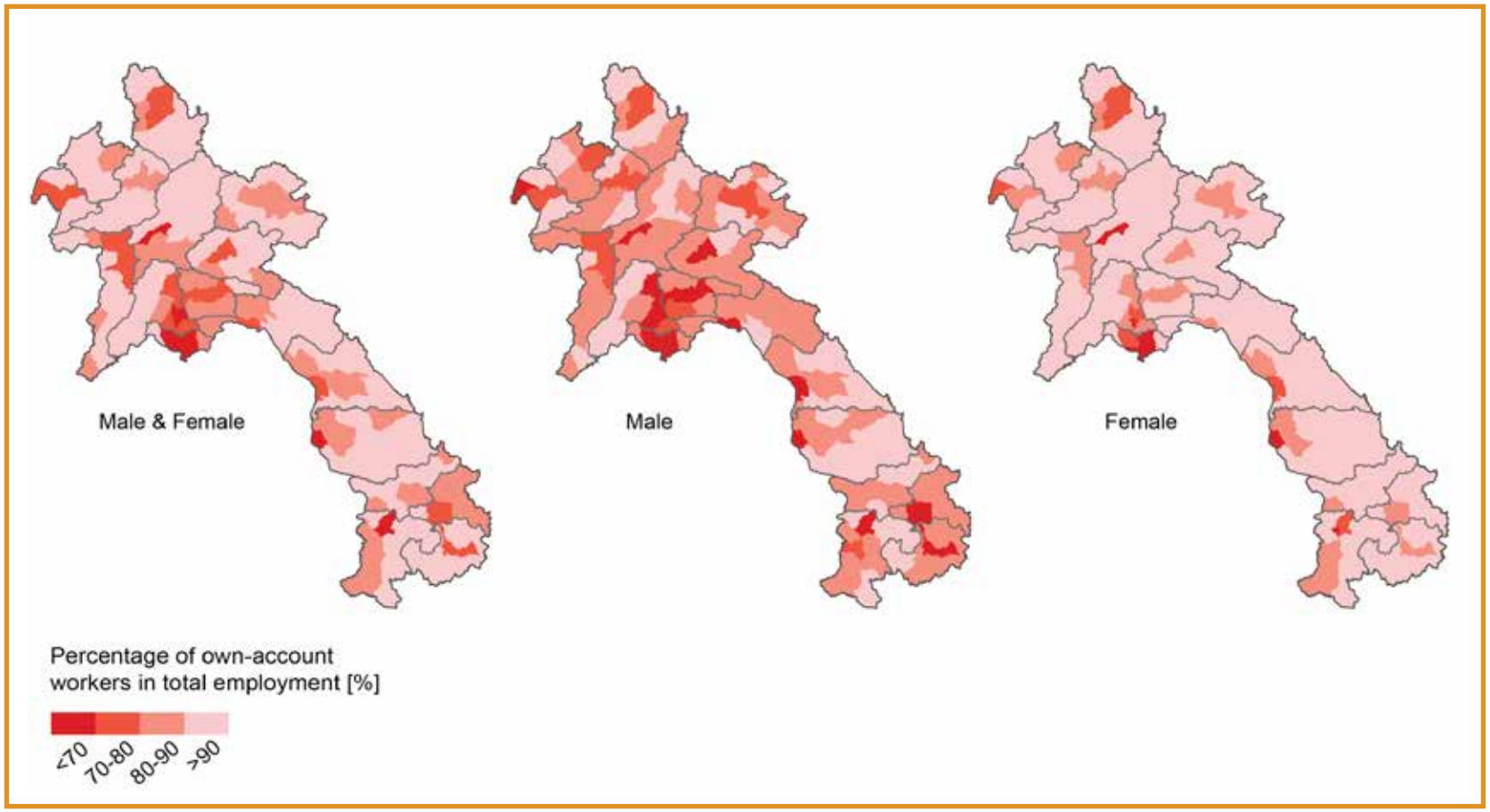
Map 16: Self-employment Rate for the 15-64 Age Group [19] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

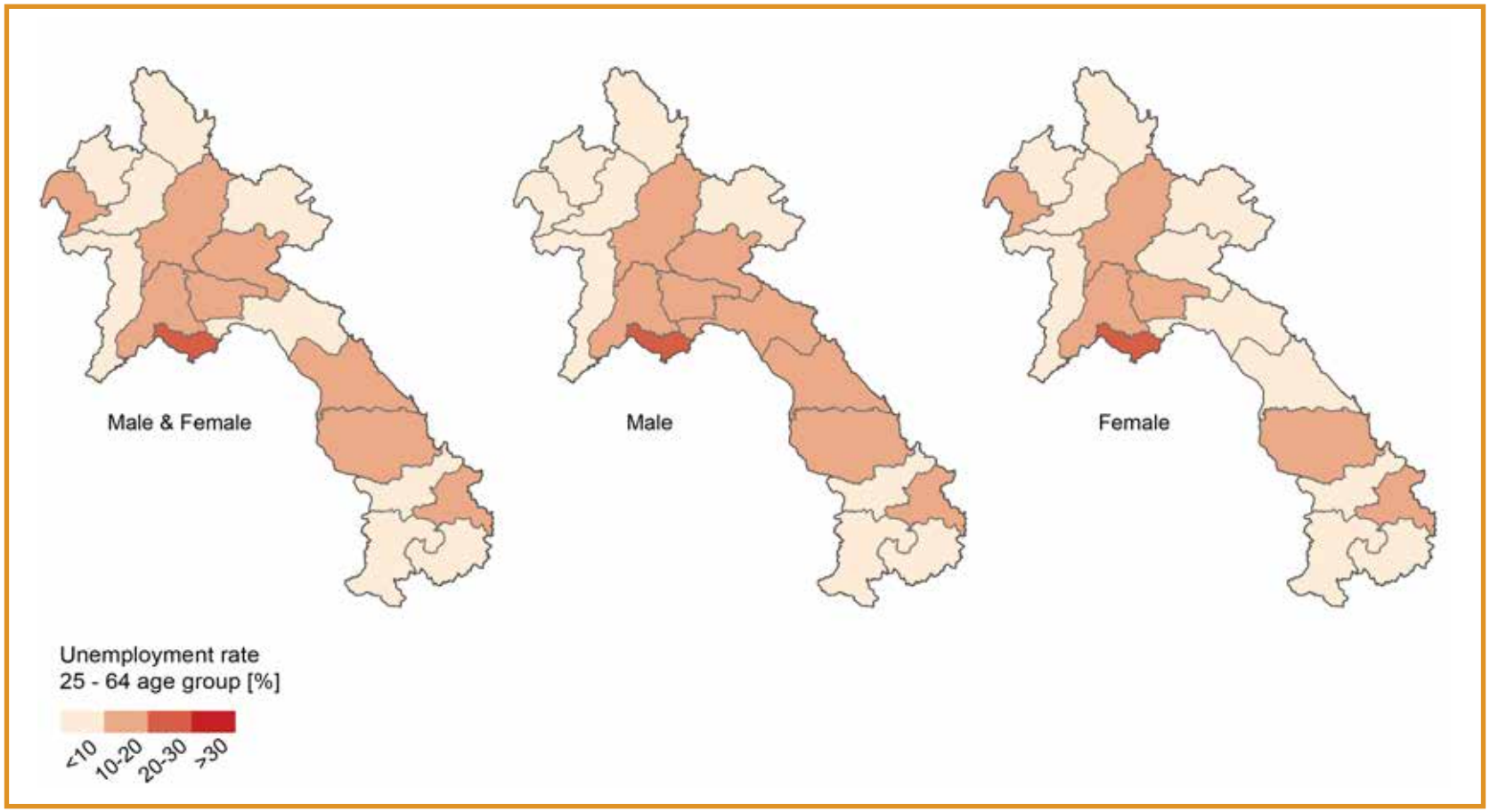
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

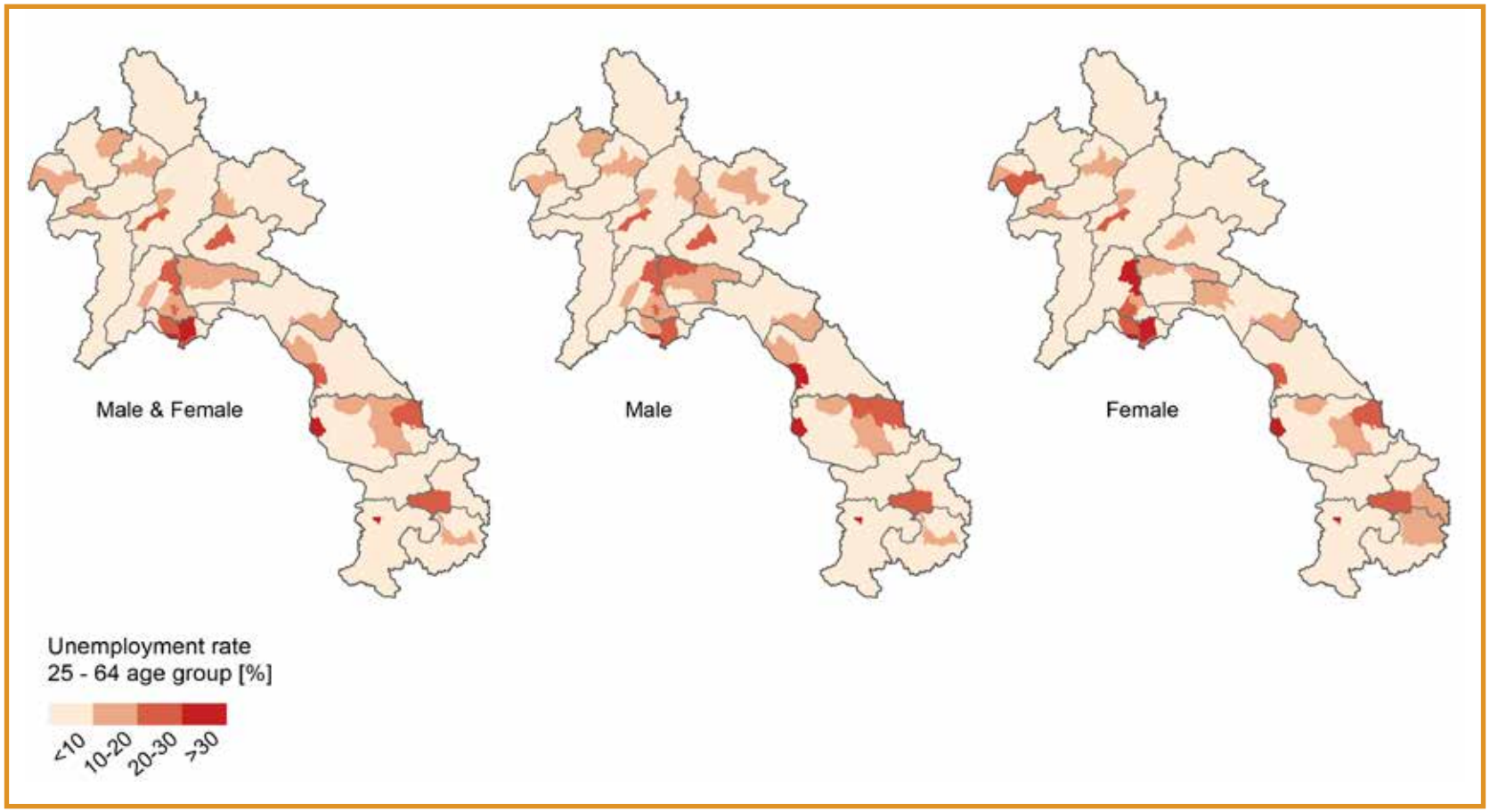
Map 17: Unemployment Rate for the 15-24 Age Group [20] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

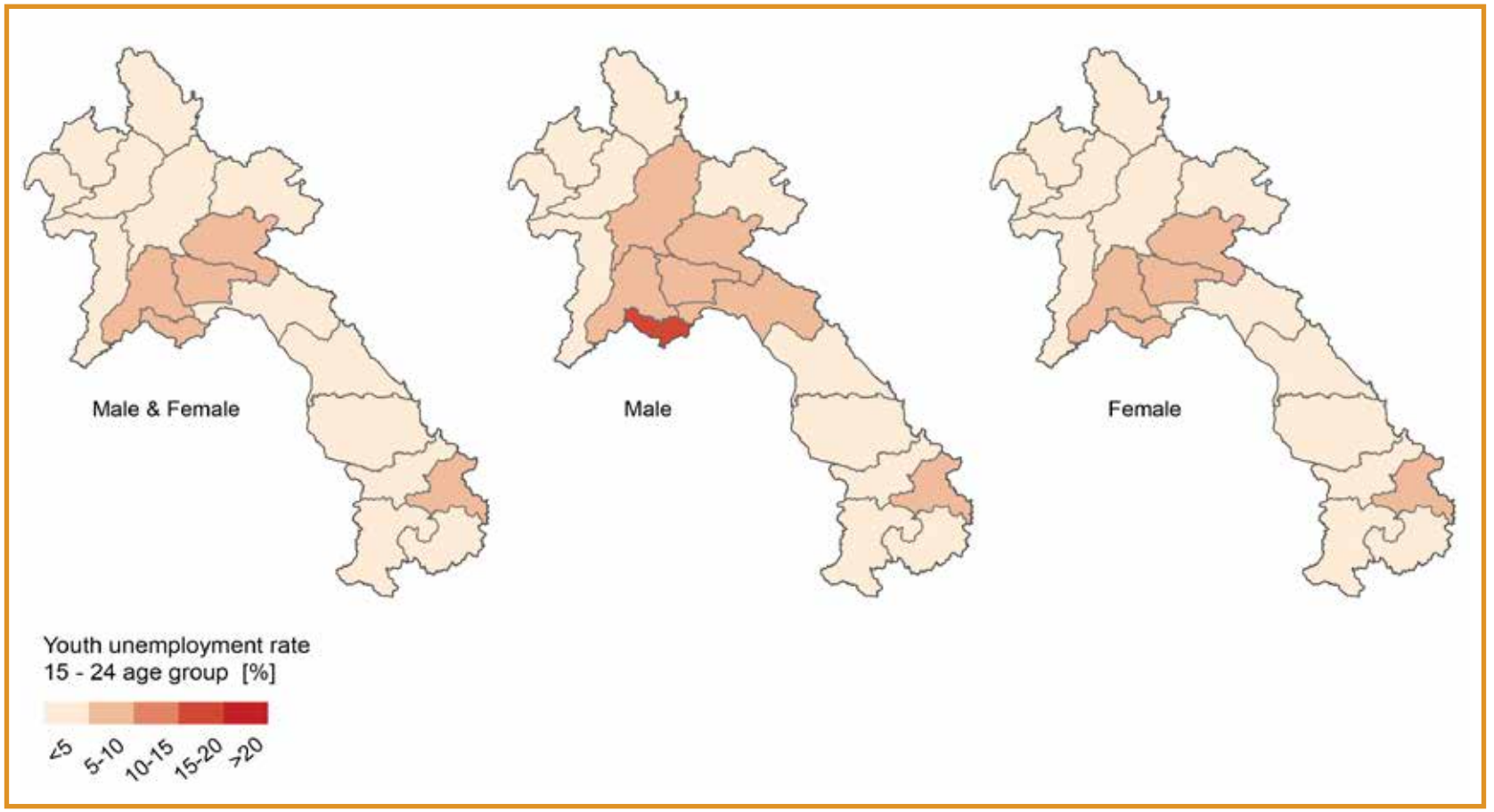
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

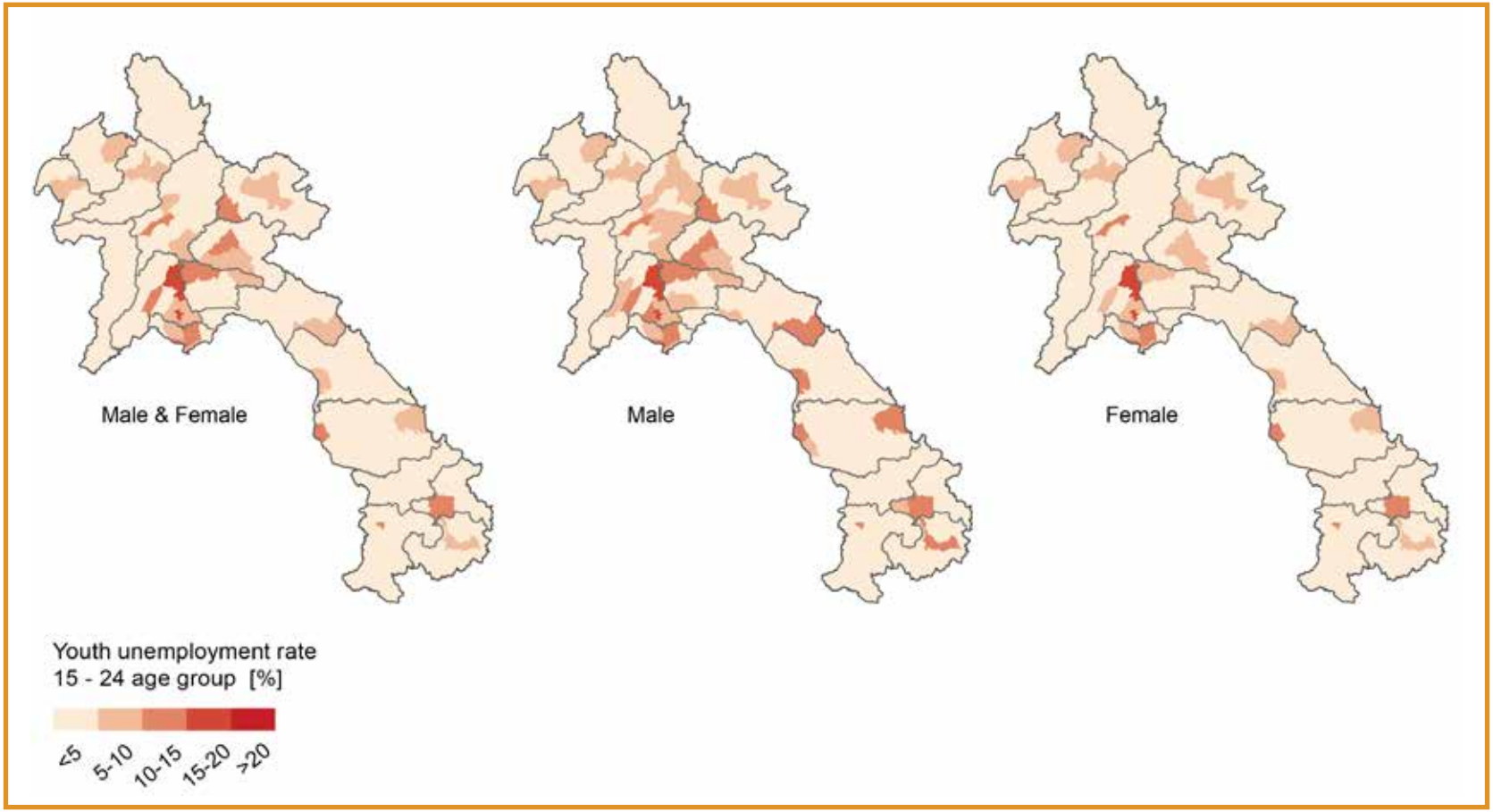
Map 18: Unemployment Rate for the 25-64 Age Group [21] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

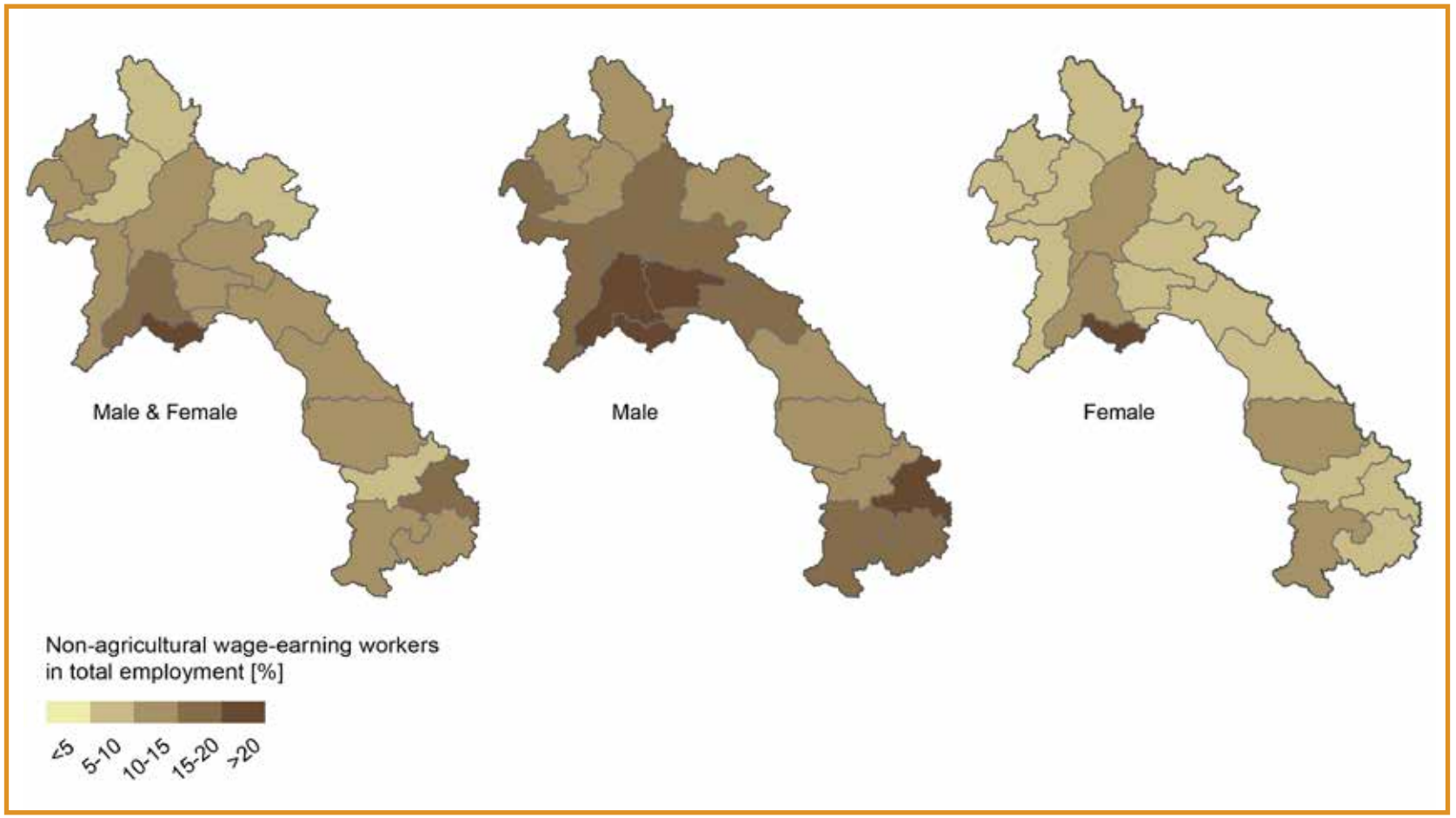
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

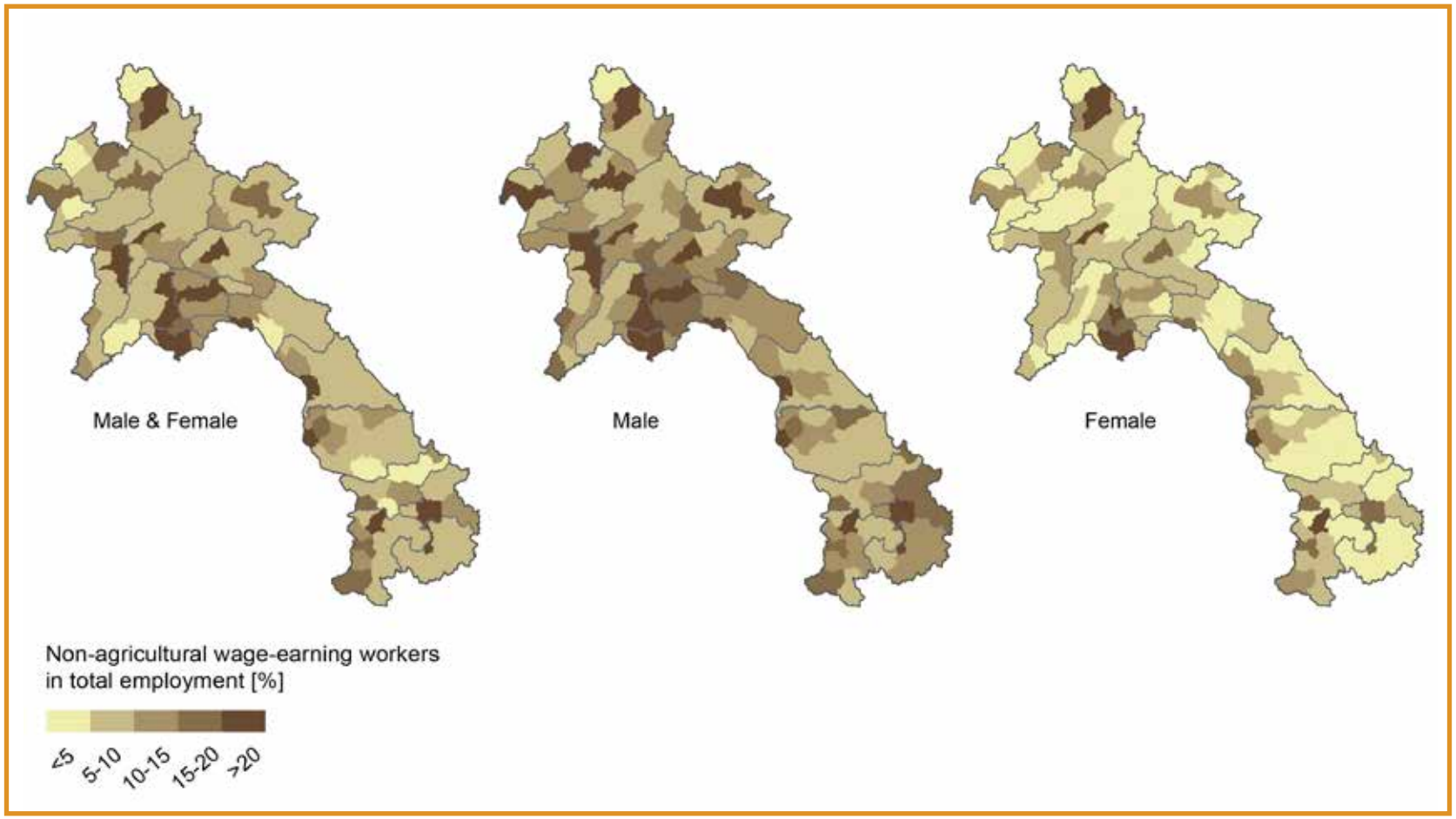
Map 19: Percentage of non-agricultural wage earner workers in total employment [22] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

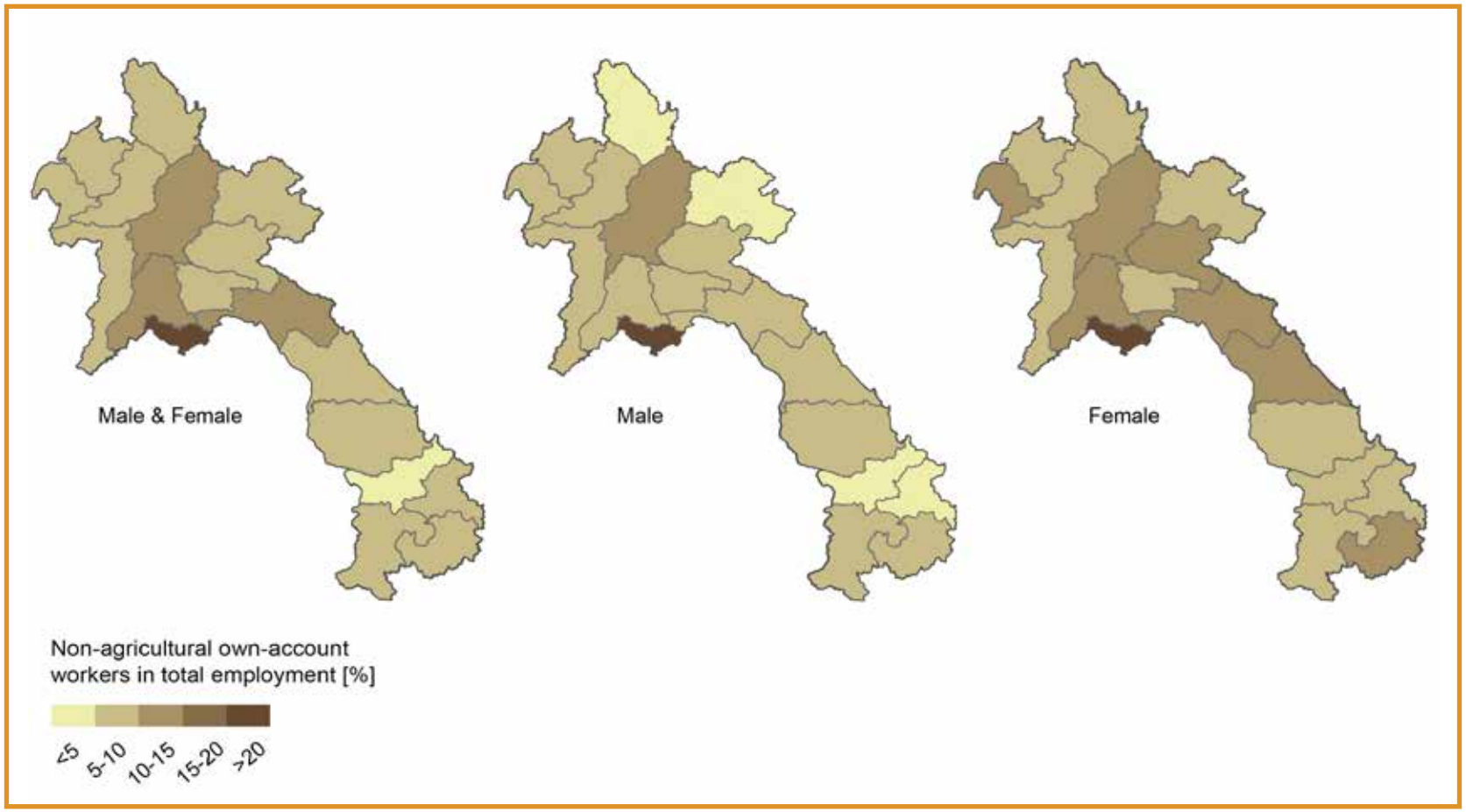
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

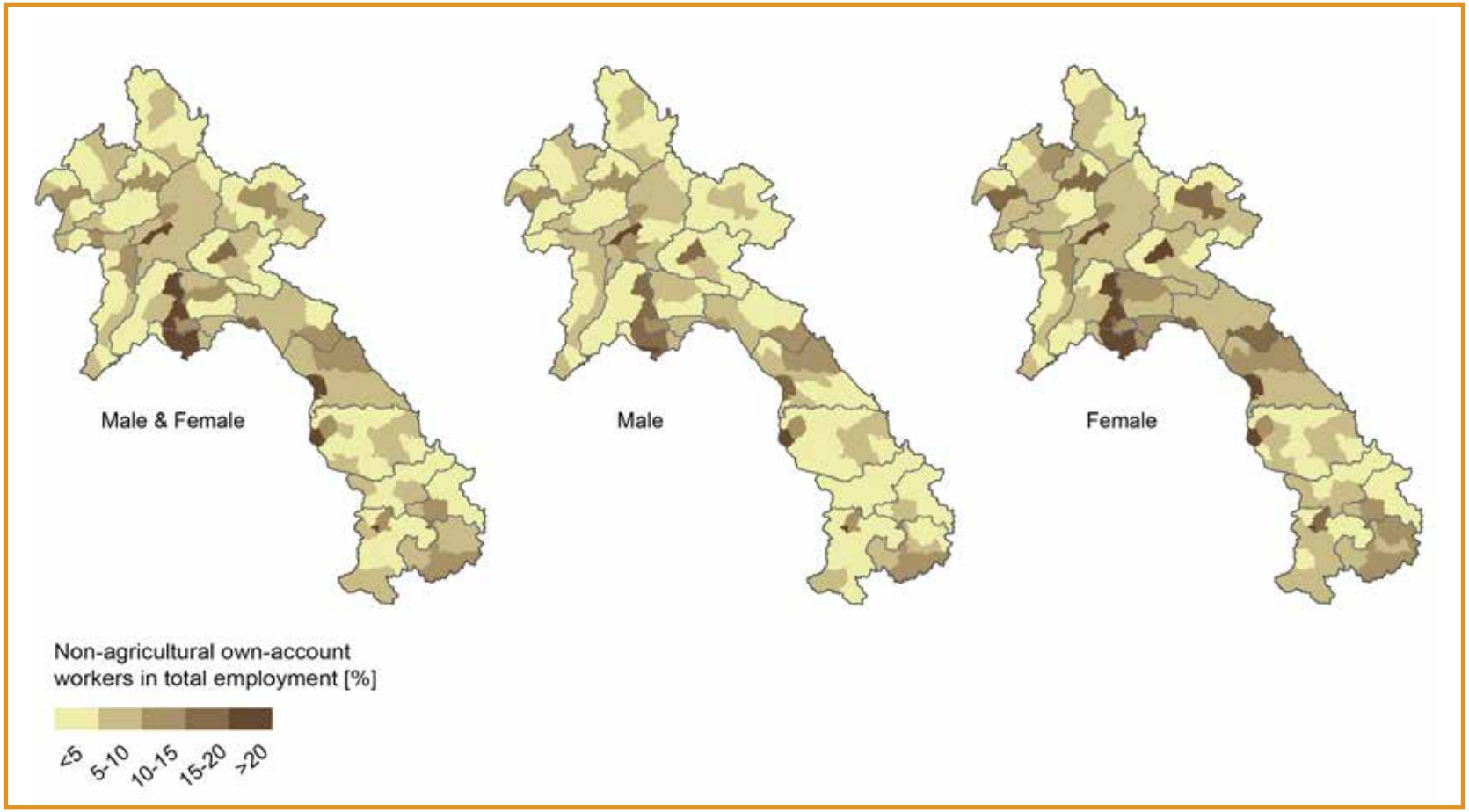
Map 20: Percentage of non-agricultural own-account workers in total employment [23] (in %)

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

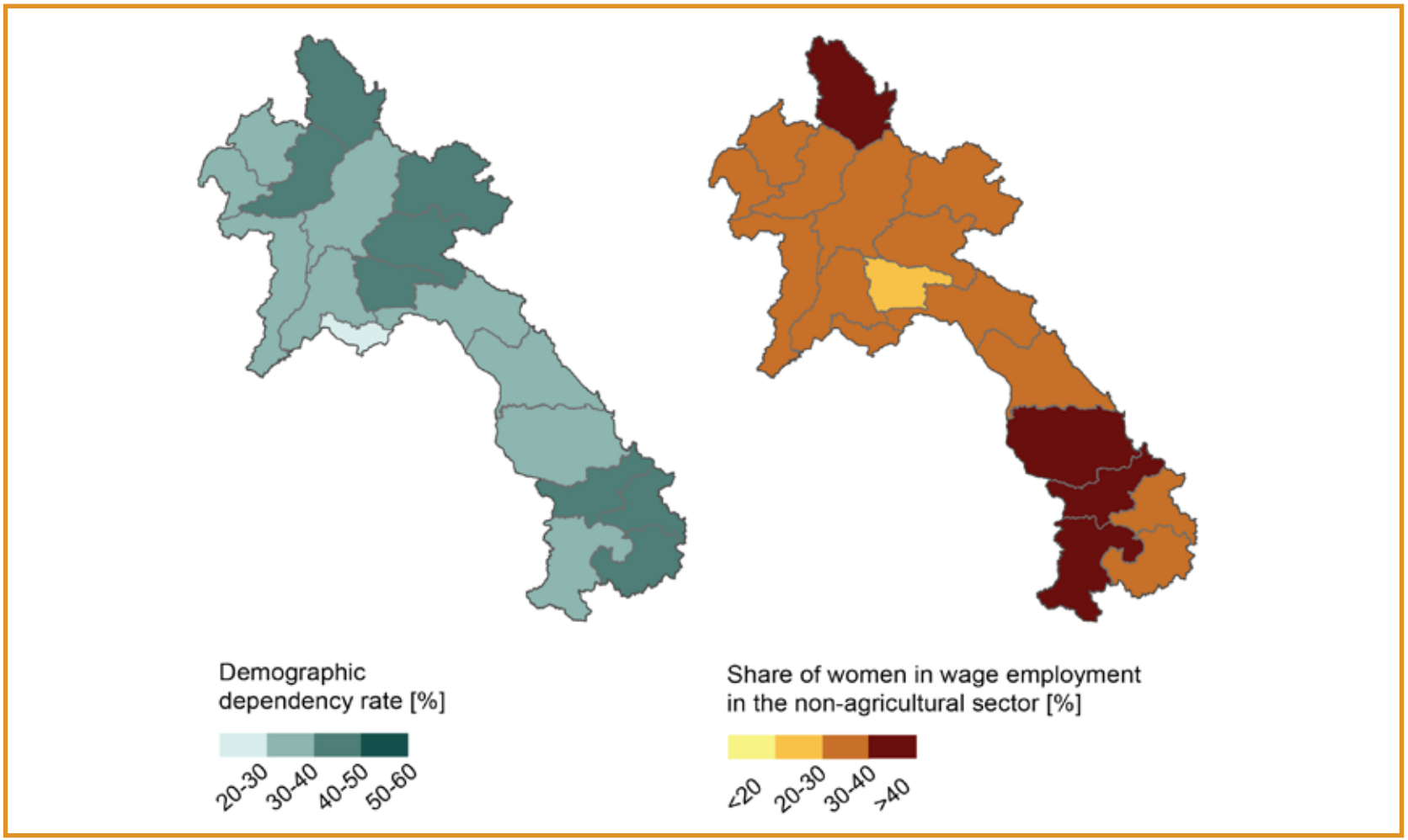
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

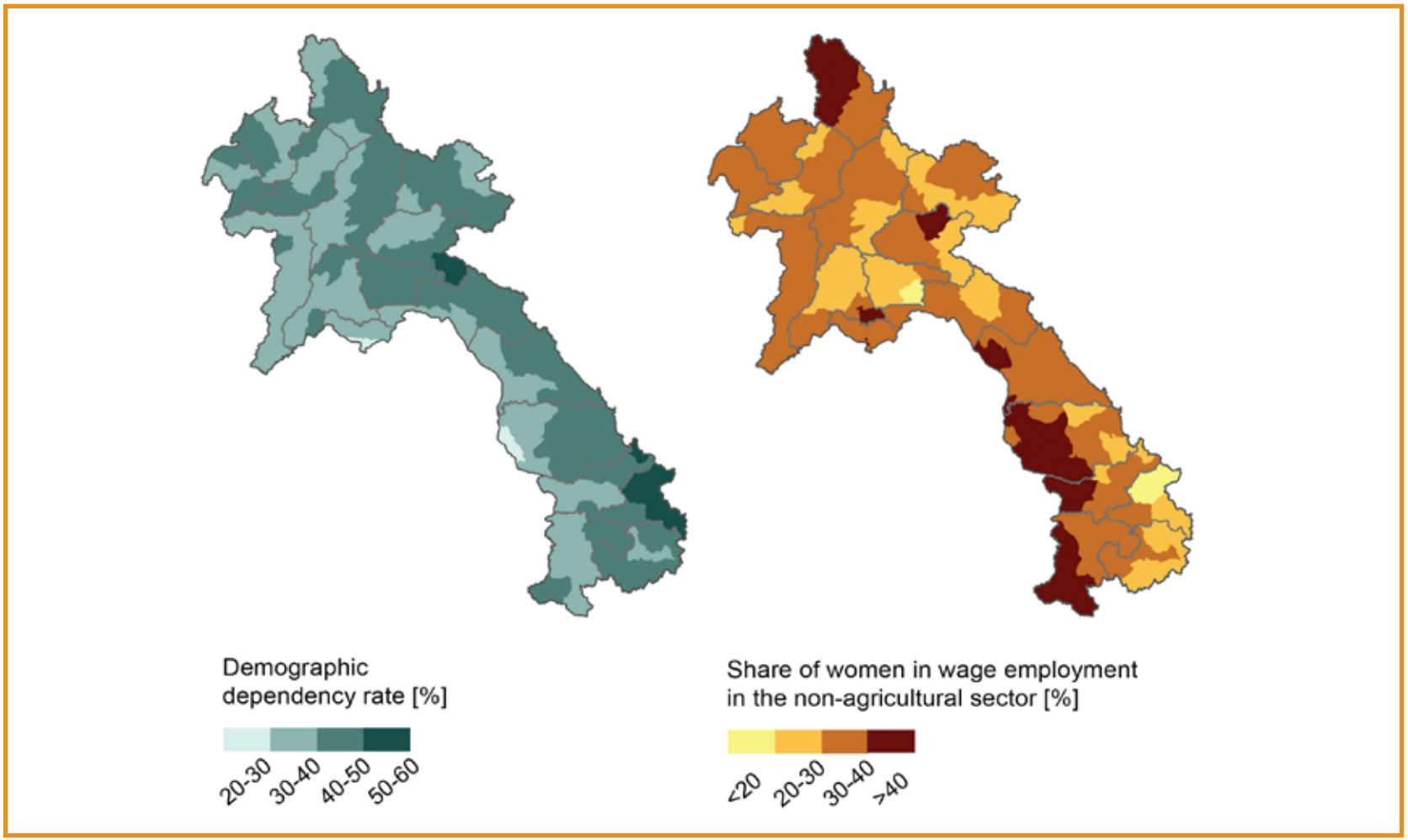
Map 21: Demographic Dependency Rate [24] & Share of Women in Wage Employment in the Non-Agricultural Sector [25]

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

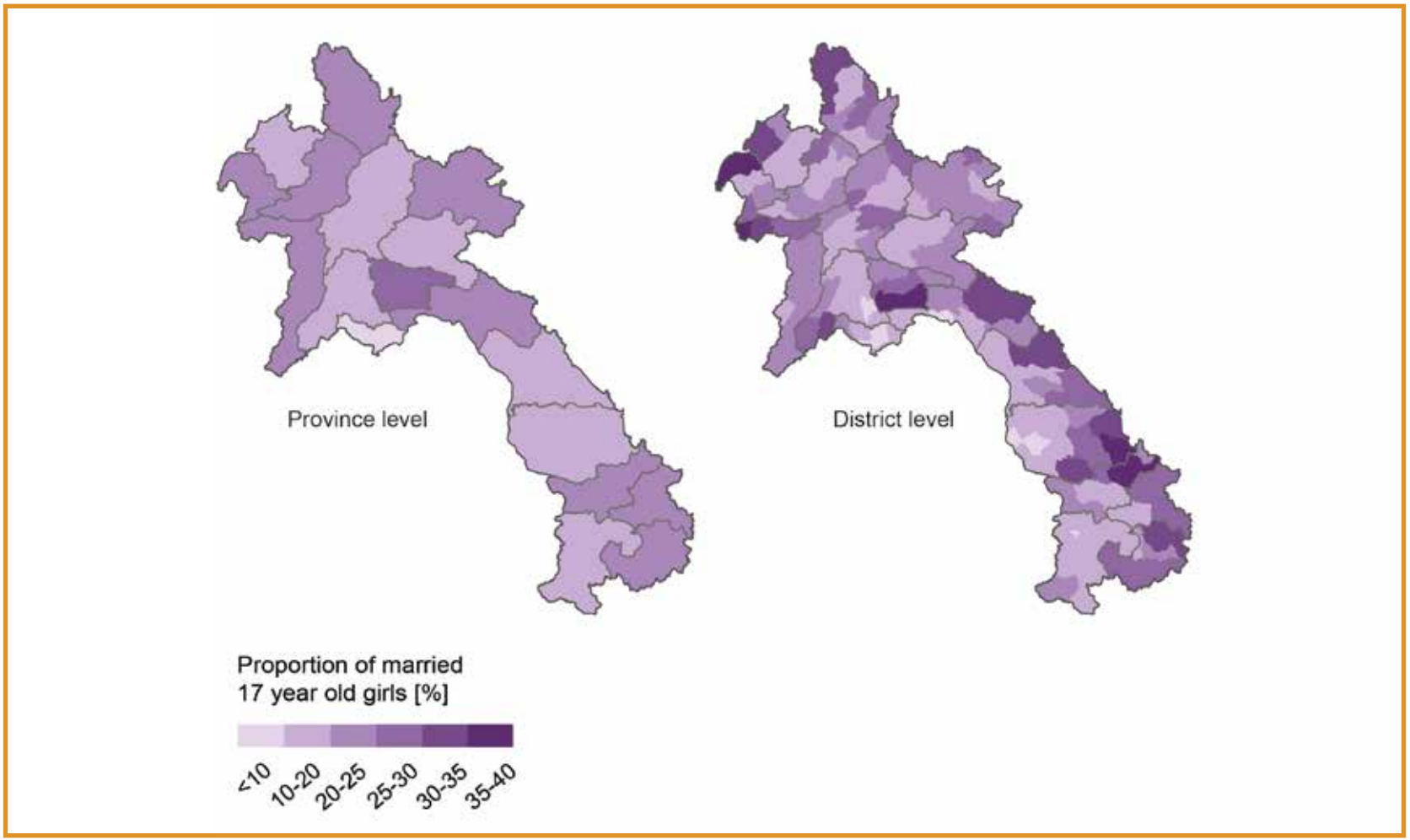
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

Map 22: Proportion of married 17 year-old girls [26] (in %)

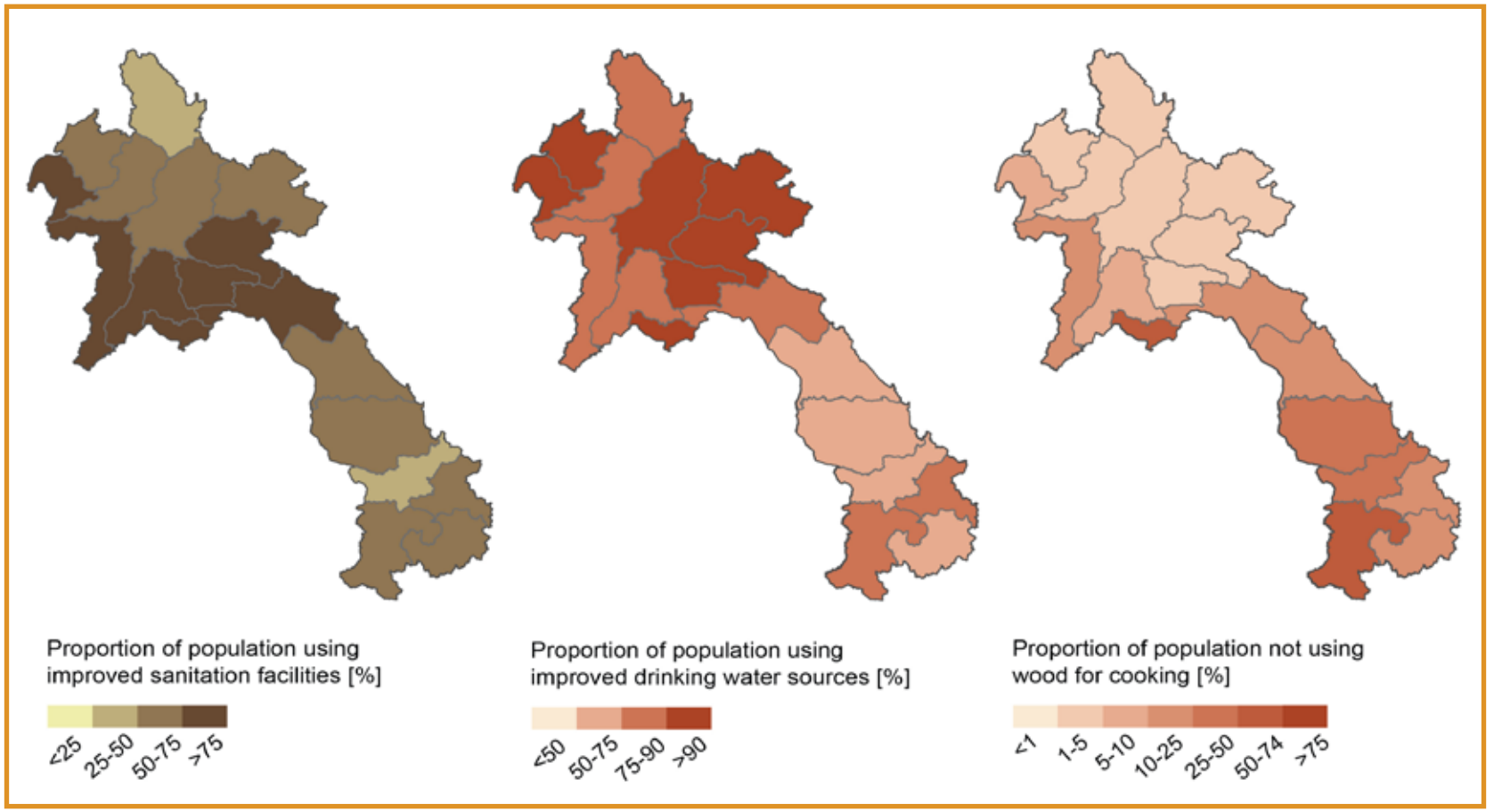
A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

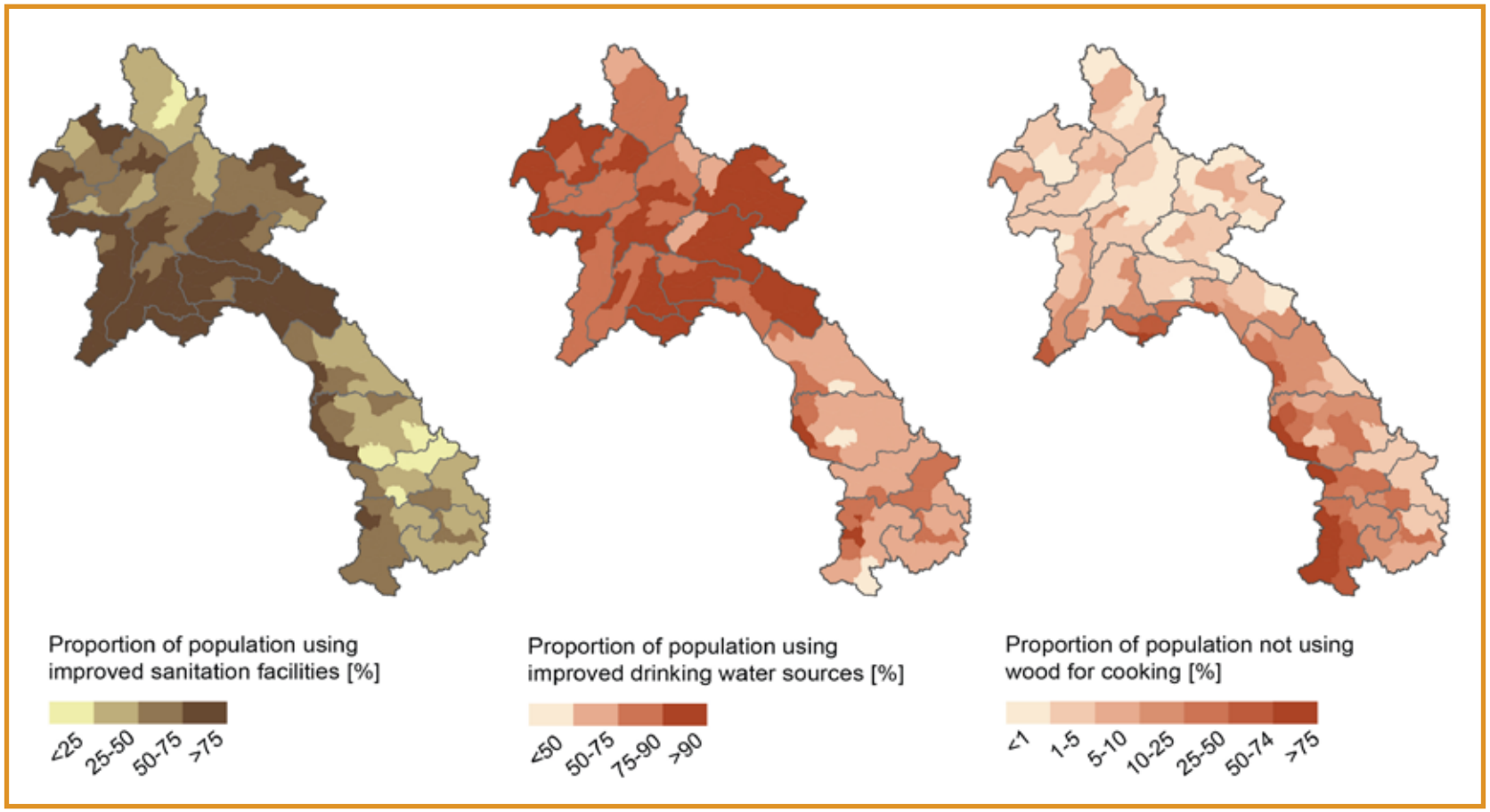
Map 23: Proportion of Population Using Improved Sanitation [27], Improved Drinking Water [28] or Not Using Wood for Cooking [29]

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

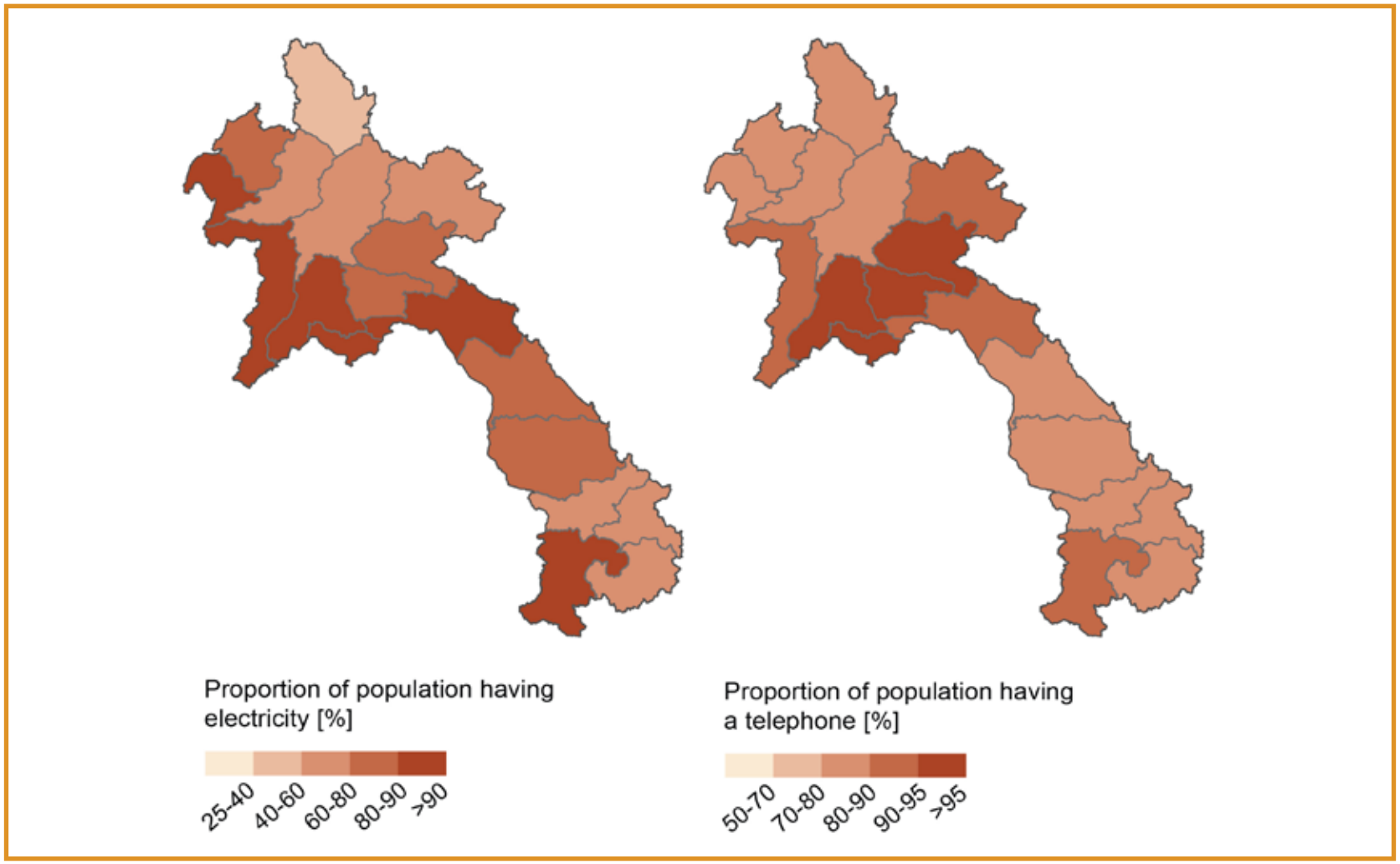
B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

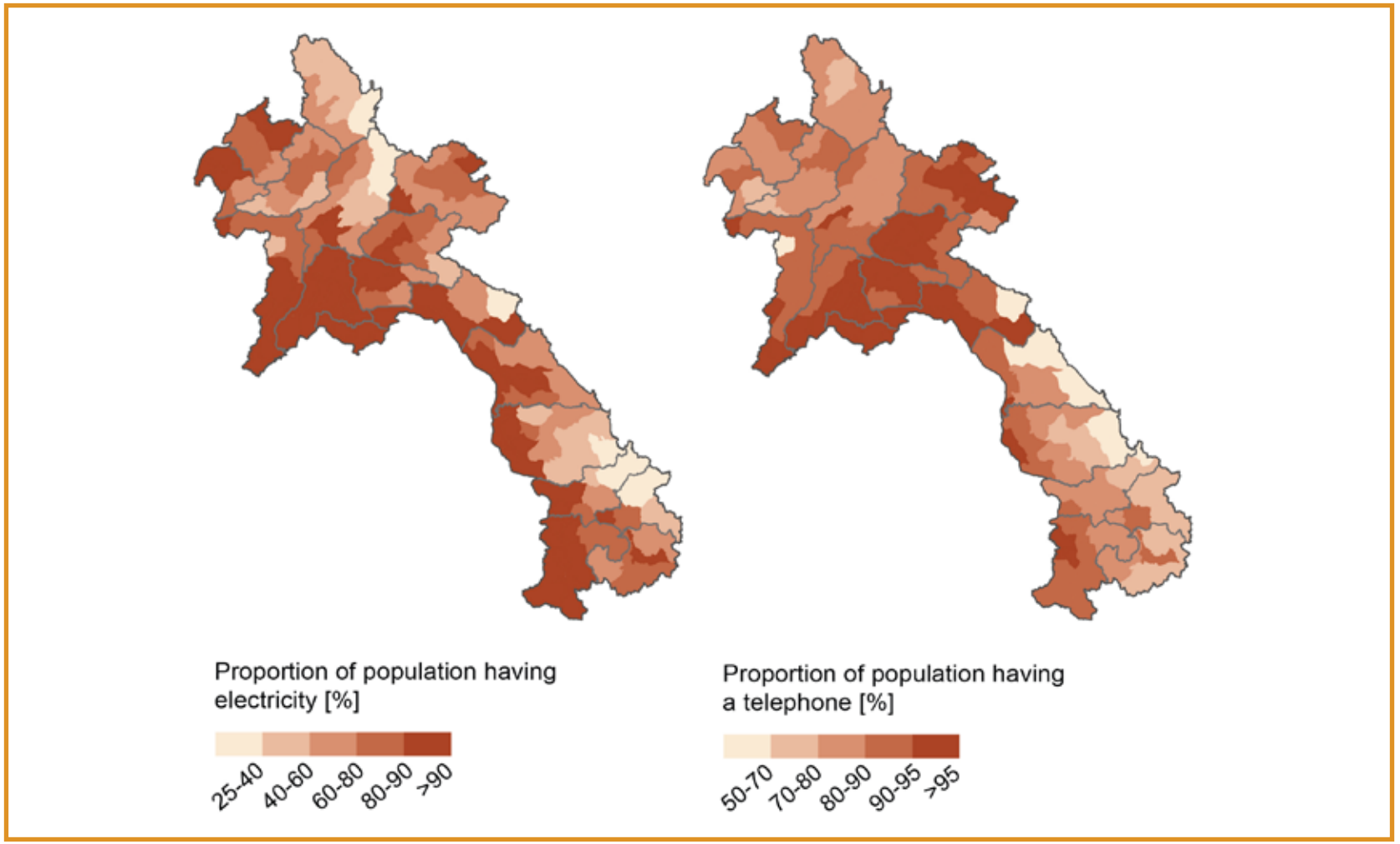
Map 24: Proportion of Population Having Electricity [30] or a Telephone [31]

A. Province



Source: Authors' calculation based on the 2015 Lao PDR Census

B. District



Source: Authors' calculation based on the 2015 Lao PDR Census

Appendix 7: Correlation Matrix between the different Poverty Indicators

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]
[1]	1.00																														
[2]	0.97	1.00																													
[3]	-0.52	-0.51	1.00																												
[4]	-0.57	-0.52	0.91	1.00																											
[5]	-0.37	-0.39	0.81	0.65	1.00																										
[6]	-0.65	-0.63	0.75	0.72	0.72	1.00																									
[7]	-0.61	-0.55	0.56	0.61	0.46	0.81	1.00																								
[8]	0.29	0.21	0.24	-0.03	0.51	-0.05	-0.14	1.00																							
[9]	-0.56	-0.55	0.72	0.65	0.71	0.98	0.80	0.06	1.00																						
[10]	-0.64	-0.56	0.53	0.62	0.41	0.76	0.98	-0.22	0.73	1.00																					
[11]	-0.31	-0.31	0.54	0.44	0.43	0.28	0.14	0.21	0.26	0.14	1.00																				
[12]	-0.51	-0.53	0.42	0.51	0.17	0.32	0.24	-0.22	0.23	0.28	0.36	1.00																			
[13]	-0.45	-0.43	0.19	0.34	-0.02	0.17	0.27	-0.29	0.10	0.31	0.05	0.63	1.00																		
[14]	0.49	0.49	-0.87	-0.76	-0.97	-0.80	-0.56	-0.34	-0.78	-0.52	-0.46	-0.27	-0.09	1.00																	
[15]	0.28	0.28	-0.49	-0.30	-0.60	-0.70	-0.68	-0.41	-0.80	-0.59	-0.17	0.09	0.15	0.57	1.00																
[16]	0.33	0.33	-0.53	-0.34	-0.64	-0.51	-0.27	-0.33	-0.51	-0.21	-0.29	0.05	0.17	0.63	0.52	1.00															
[17]	0.07	0.08	-0.03	0.16	-0.20	-0.24	-0.15	-0.23	-0.31	-0.08	-0.02	0.37	0.39	0.15	0.58	0.74	1.00														
[18]	0.32	0.29	-0.29	-0.30	-0.24	-0.53	-0.80	-0.01	-0.59	-0.79	0.02	-0.03	-0.12	0.29	0.65	0.01	0.11	1.00													
[19]	0.54	0.43	-0.35	-0.46	-0.18	-0.46	-0.78	0.29	-0.43	-0.86	-0.10	-0.25	-0.33	0.28	0.35	0.04	-0.05	0.75	1.00												
[20]	-0.43	-0.38	0.29	0.35	0.22	0.54	0.77	-0.15	0.56	0.77	-0.02	0.09	0.20	-0.29	-0.53	-0.03	-0.08	-0.87	-0.72	1.00											
[21]	-0.42	-0.36	0.22	0.31	0.09	0.40	0.68	-0.24	0.40	0.72	-0.03	0.18	0.28	-0.18	-0.35	0.14	0.09	-0.84	-0.79	0.89	1.00										
[22]	-0.53	-0.42	0.35	0.46	0.18	0.47	0.79	-0.27	0.43	0.86	0.10	0.24	0.33	-0.29	-0.36	-0.04	0.04	-0.76	-1.00	0.73	0.79	1.00									
[23]	-0.55	-0.45	0.33	0.44	0.20	0.45	0.74	-0.23	0.42	0.81	0.08	0.26	0.32	-0.29	-0.34	-0.01	0.06	-0.75	-0.90	0.74	0.84	0.90	1.00								
[24]	0.72	0.67	-0.52	-0.71	-0.28	-0.56	-0.59	0.41	-0.44	-0.66	-0.25	-0.61	-0.60	0.44	0.01	0.11	-0.27	0.27	0.58	-0.35	-0.40	-0.58	-0.56	1.00							
[25]	-0.20	-0.20	0.09	0.30	-0.03	-0.01	0.09	-0.30	-0.11	0.14	0.04	0.45	0.55	-0.06	0.43	0.19	0.52	0.12	-0.21	-0.01	0.06	0.20	0.14	-0.55	1.00						
[26]	0.48	0.45	-0.51	-0.59	-0.35	-0.52	-0.67	0.05	-0.49	-0.67	-0.29	-0.41	-0.48	0.45	0.32	0.05	-0.23	0.48	0.57	-0.49	-0.46	-0.58	-0.54	0.60	-0.38	1.00					
[27]	-0.68	-0.65	0.73	0.72	0.64	0.85	0.67	-0.11	0.81	0.66	0.29	0.33	0.15	-0.74	-0.50	-0.49	-0.17	-0.40	-0.45	0.43	0.37	0.44	0.44	-0.64	0.04	-0.37	1.00				
[28]	-0.47	-0.44	0.41	0.30	0.48	0.60	0.54	0.07	0.62	0.51	0.11	-0.03	-0.05	-0.49	-0.58	-0.46	-0.38	-0.41	-0.38	0.38	0.29	0.38	0.36	-0.31	-0.16	-0.20	0.65	1.00			
[29]	-0.36	-0.27	0.31	0.51	0.10	0.18	0.34	-0.30	0.08	0.43	0.15	0.43	0.42	-0.20	0.19	0.14	0.49	-0.25	-0.56	0.26	0.42	0.56	0.51	-0.62	0.53	-0.47	0.27	-0.01	1.00		
[30]	-0.65	-0.63	0.58	0.67	0.38	0.62	0.51	-0.24	0.55	0.51	0.33	0.58	0.38	-0.50	-0.14	-0.19	0.20	-0.23	-0.38	0.33	0.30	0.37	0.37	-0.72	0.31	-0.45	0.70	0.29	0.44	1.00	
[31]	-0.64	-0.62	0.64	0.69	0.54	0.75	0.62	-0.13	0.71	0.59	0.23	0.36	0.27	-0.63	-0.32	-0.30	0.09	-0.33	-0.37	0.35	0.29	0.37	0.36	-0.63	0.21	-0.44	0.73	0.43	0.34	0.76	1.00

Source: Authors' calculation based on the 2015 Lao PDR Census

Note: The indexed columns and rows correspond to the indicator numbers in Table 1

Photo by Remy Rossi / World Bank, 2013

Appendix 8: Monetary Poverty Indices, by Province and District

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
100	**Vientiane Capital**	**771,974**	**8.5**	**2.0**	**0.7**	**65,695**
			(1.2)	*(0.4)*	*(0.2)*	
101	Chanthabuly	65,218	5.0	1.1	0.4	3,241
			(1.3)	*(0.4)*	*(0.1)*	
102	Sikhottabong	115,094	7.4	1.6	0.6	8,528
			(1.4)	*(0.4)*	*(0.2)*	
103	Xaysetha	106,966	6.5	1.4	0.5	6,963
			(1.2)	*(0.3)*	*(0.1)*	
104	Sisattanak	58,318	5.8	1.3	0.4	3,353
			(1.2)	*(0.3)*	*(0.1)*	
105	Naxaithong	71,504	10.5	2.4	0.9	7,506
			(1.9)	*(0.6)*	*(0.2)*	
106	Xaythany	183,358	9.4	2.2	0.8	17,291
			(1.6)	*(0.5)*	*(0.2)*	
107	Hadxaifong	94,597	9.6	2.2	0.8	9,081
			(1.5)	*(0.4)*	*(0.2)*	
108	Sangthong	28,916	12.2	3.0	1.1	3,518
			(2.3)	*(0.7)*	*(0.3)*	
109	Mayparkngum	48,003	12.9	3.2	1.2	6,192
			(2.3)	*(0.8)*	*(0.4)*	
200	**Phongsaly**	**171,426**	**22.7**	**4.9**	**1.6**	**38,894**
			(2.1)	*(0.6)*	*(0.2)*	
201	Phongsaly	21,361	17.5	3.9	1.4	3,739
			(2.7)	*(0.8)*	*(0.3)*	
202	May	26,145	28.8	6.4	2.1	7,523
			(2.7)	*(0.8)*	*(0.4)*	
203	Khua	25,629	24.3	5.2	1.7	6,236
			(2.8)	*(0.8)*	*(0.3)*	
204	Samphanh	22,981	27.6	6.3	2.1	6,341
			(3.4)	*(1.1)*	*(0.5)*	
205	Boonneua	21,383	17.6	3.5	1.1	3,761
			(3.1)	*(0.8)*	*(0.3)*	
206	Nhotou	30,525	21.1	4.4	1.4	6,437
			(2.5)	*(0.7)*	*(0.3)*	
207	Boontai	23,402	20.7	4.3	1.4	4,854
			(3.0)	*(0.8)*	*(0.3)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
300	**Luangnamtha**	**168,434**	**21.1**	**4.6**	**1.5**	**35,524**
			(2.2)	*(0.7)*	*(0.3)*	
301	Namtha	51,835	16.2	3.6	1.2	8,411
			(2.8)	*(0.8)*	*(0.3)*	
302	Sing	38,044	18.3	3.8	1.2	6,944
			(2.8)	*(0.8)*	*(0.3)*	
303	Long	33,521	23.8	5.1	1.6	7,978
			(3.3)	*(0.9)*	*(0.4)*	
304	Viengphoukha	23,162	26.3	6.1	2.1	6,093
			(3.5)	*(1.1)*	*(0.5)*	
305	Nalae	21,872	27.9	6.2	2.0	6,095
			(3.0)	*(0.9)*	*(0.4)*	
400	**Oudomxay**	**295,813**	**25.5**	**5.7**	**1.9**	**75,327**
			(1.9)	*(0.6)*	*(0.2)*	
401	Xay	75,214	17.7	3.8	1.2	13,305
			(2.3)	*(0.6)*	*(0.2)*	
402	La	16,506	22.8	4.7	1.5	3,763
			(3.3)	*(0.9)*	*(0.3)*	
403	Namor	37,352	26.1	5.7	1.8	9,750
			(3.2)	*(1.0)*	*(0.4)*	
404	Nga	29,965	30.6	7.0	2.3	9,168
			(3.0)	*(0.9)*	*(0.4)*	
405	Beng	36,544	21.4	4.5	1.4	7,828
			(3.0)	*(0.9)*	*(0.4)*	
406	Hoon	71,537	28.8	6.4	2.1	20,571
			(2.8)	*(0.8)*	*(0.3)*	
407	Pakbeng	28,695	38.1	9.2	3.2	10,937
			(3.7)	*(1.2)*	*(0.5)*	
500	**Bokeo**	**171,585**	**25.5**	**5.9**	**2.0**	**43,738**
			(2.0)	*(0.7)*	*(0.3)*	
501	Huoixai	67,411	21.7	4.9	1.6	14,633
			(2.4)	*(0.8)*	*(0.3)*	
502	Tonpheung	32,410	19.1	4.3	1.5	6,197
			(3.0)	*(0.9)*	*(0.4)*	
503	Meung	14,005	28.1	7.1	2.6	3,935
			(4.7)	*(1.8)*	*(0.9)*	
504	Phaoudom	39,569	34.2	8.1	2.8	13,545
			(3.3)	*(1.1)*	*(0.5)*	
505	Paktha	18,190	29.8	7.1	2.5	5,427
			(3.9)	*(1.3)*	*(0.6)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
600	**Luangprabang**	**418,000**	**22.9**	**4.9**	**1.6**	**95,575**
			(1.7)	*(0.5)*	*(0.2)*	
601	Luangprabang	82,541	11.5	2.3	0.7	9,532
			(2.0)	*(0.5)*	*(0.2)*	
602	Xiengngeun	31,689	22.7	4.8	1.5	7,198
			(3.2)	*(0.9)*	*(0.3)*	
603	Nan	27,992	16.3	3.3	1.0	4,566
			(2.5)	*(0.7)*	*(0.3)*	
604	Parkou	25,509	21.2	4.3	1.3	5,401
			(2.7)	*(0.8)*	*(0.3)*	
605	Nambak	67,113	24.1	5.2	1.7	16,191
			(3.1)	*(0.9)*	*(0.4)*	
606	Ngoi	29,546	27.0	5.8	1.9	7,973
			(2.4)	*(0.7)*	*(0.3)*	
607	Pakxeng	22,024	30.2	6.7	2.2	6,647
			(2.9)	*(0.9)*	*(0.4)*	
608	Phonxay	31,802	30.5	6.8	2.2	9,695
			(3.5)	*(1.0)*	*(0.4)*	
609	Chomphet	29,927	26.5	5.9	1.9	7,943
			(2.9)	*(0.9)*	*(0.4)*	
610	Viengkham	28,441	30.5	6.8	2.2	8,664
			(2.9)	*(0.9)*	*(0.4)*	
611	Phoukhoune	22,735	26.7	5.7	1.8	6,061
			(3.9)	*(1.1)*	*(0.5)*	
612	Phonthong	18,681	30.5	7.2	2.5	5,696
			(3.6)	*(1.1)*	*(0.5)*	
700	**Huaphanh**	**285,450**	**37.0**	**8.5**	**2.8**	**105,680**
			(3.7)	*(1.2)*	*(0.5)*	
701	Xamneua	54,960	30.8	7.0	2.3	16,902
			(3.7)	*(1.2)*	*(0.5)*	
702	Xiengkhor	25,666	38.0	8.5	2.8	9,758
			(4.9)	*(1.5)*	*(0.6)*	
703	Huim	12,118	29.3	5.9	1.8	3,545
			(5.0)	*(1.4)*	*(0.5)*	
704	Viengxay	31,298	27.7	5.5	1.7	8,658
			(4.2)	*(1.1)*	*(0.4)*	
705	Huameuang	32,234	45.6	11.0	3.8	14,711
			(5.3)	*(1.9)*	*(0.8)*	
706	Xamtay	36,696	39.5	9.2	3.1	14,512
			(4.8)	*(1.6)*	*(0.7)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
707	Sopbao	25,326	36.7	8.1	2.6	9,300
			(4.3)	*(1.4)*	*(0.6)*	
708	Add	26,872	38.8	8.8	2.9	10,435
			(4.8)	*(1.6)*	*(0.6)*	
709	Kuane	24,525	45.2	10.9	3.7	11,093
			(5.3)	*(1.9)*	*(0.8)*	
710	Sone	15,755	42.8	10.3	3.5	6,749
			(6.1)	*(2.2)*	*(0.9)*	
800	**Xayaboury**	**368,267**	**20.2**	**4.5**	**1.5**	**74,325**
			(2.1)	*(0.7)*	*(0.3)*	
801	Xayabury	70,109	21.8	5.1	1.8	15,312
			(3.2)	*(1.0)*	*(0.5)*	
802	Khop	19,773	22.1	4.9	1.7	4,362
			(3.6)	*(1.1)*	*(0.5)*	
803	Hongsa	26,524	21.1	5.0	1.7	5,584
			(3.9)	*(1.2)*	*(0.5)*	
804	Ngeun	17,028	23.2	5.4	1.9	3,957
			(4.7)	*(1.5)*	*(0.7)*	
805	Xienghone	31,863	20.8	4.7	1.6	6,632
			(3.3)	*(1.0)*	*(0.4)*	
806	Phiang	55,947	23.5	5.6	2.0	13,158
			(4.2)	*(1.3)*	*(0.6)*	
807	Parklai	66,563	16.0	3.3	1.0	10,663
			(2.8)	*(0.8)*	*(0.3)*	
808	Kenethao	39,708	15.4	3.1	1.0	6,112
			(3.0)	*(0.8)*	*(0.3)*	
809	Botene	17,217	13.2	2.6	0.8	2,268
			(3.3)	*(0.8)*	*(0.3)*	
810	Thongmyxay	8,509	11.3	2.1	0.6	961
			(3.7)	*(0.9)*	*(0.3)*	
811	Xaysathan	15,026	35.4	8.3	2.8	5,323
			(5.1)	*(1.7)*	*(0.7)*	
900	**Xienkhuang**	**238,766**	**28.2**	**7.2**	**2.7**	**67,336**
			(2.7)	*(0.9)*	*(0.4)*	
901	Pek	71,321	13.6	2.8	0.9	9,720
			(2.5)	*(0.7)*	*(0.2)*	
902	Kham	47,256	31.2	7.8	2.8	14,749
			(3.1)	*(1.0)*	*(0.5)*	
903	Nonghed	37,406	41.5	13.2	5.9	15,525
			(4.3)	*(1.8)*	*(1.1)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
904	Khoune	32,574	31.0	7.3	2.5	10,088
			(4.2)	*(1.4)*	*(0.6)*	
905	Morkmay	14,061	42.3	11.2	4.4	5,942
			(7.6)	*(2.9)*	*(1.4)*	
906	Phoukoud	24,873	35.3	8.8	3.2	8,779
			(4.0)	*(1.5)*	*(0.7)*	
907	Phaxay	11,275	22.5	4.7	1.5	2,534
			(4.4)	*(1.3)*	*(0.5)*	
1000	**Vientiane Province**	**406,810**	**16.5**	**3.5**	**1.1**	**67,298**
			(2.2)	*(0.6)*	*(0.3)*	
1001	Phonhong	62,307	9.9	1.9	0.6	6,198
			(2.7)	*(0.7)*	*(0.2)*	
1002	Thoulakhom	51,369	9.5	1.8	0.5	4,903
			(2.9)	*(0.7)*	*(0.2)*	
1003	Keooudom	16,678	9.5	1.8	0.5	1,589
			(2.8)	*(0.6)*	*(0.2)*	
1004	Kasy	35,993	24.2	5.2	1.6	8,715
			(4.1)	*(1.3)*	*(0.5)*	
1005	Vangvieng	53,488	16.8	3.4	1.1	8,981
			(3.4)	*(0.9)*	*(0.3)*	
1006	Feuang	41,062	21.1	4.4	1.4	8,683
			(5.2)	*(1.5)*	*(0.6)*	
1007	Xanakharm	39,712	11.3	2.1	0.6	4,496
			(2.9)	*(0.8)*	*(0.3)*	
1008	Mad	20,820	21.9	4.5	1.4	4,561
			(4.7)	*(1.3)*	*(0.5)*	
1009	viengkham	17,012	6.7	1.2	0.4	1,136
			(2.2)	*(0.5)*	*(0.2)*	
1010	Hinherb	28,598	17.1	3.4	1.0	4,889
			(3.1)	*(0.8)*	*(0.3)*	
1013	Meun	39,771	33.0	8.3	3.0	13,135
			(6.9)	*(2.7)*	*(1.3)*	
1100	**Borikhamxay**	**264,135**	**20.7**	**4.8**	**1.6**	**54,781**
			(2.1)	*(0.7)*	*(0.3)*	
1101	Pakxane	43,161	8.0	1.5	0.4	3,435
			(2.2)	*(0.5)*	*(0.2)*	
1102	Thaphabath	24,351	8.6	1.6	0.4	2,099
			(2.8)	*(0.6)*	*(0.2)*	
1103	Pakkading	49,474	18.9	3.8	1.1	9,330
			(3.5)	*(0.9)*	*(0.3)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
1104	Bolikhanh	45,960	22.6	4.9	1.6	10,399
			(4.7)	*(1.5)*	*(0.6)*	
1105	Khamkeuth	61,879	21.5	4.4	1.4	13,279
			(3.1)	*(0.9)*	*(0.4)*	
1106	Viengthong	28,587	32.7	8.6	3.3	9,351
			(5.8)	*(2.1)*	*(1.0)*	
1107	Xaychamphone	10,723	64.2	21.3	9.2	6,887
			(7.4)	*(4.2)*	*(2.4)*	
1200	**Khammuane**	**383,202**	**27.1**	**6.2**	**2.1**	**103,978**
			(1.8)	*(0.6)*	*(0.3)*	
1201	Thakhek	87,261	17.2	3.4	1.0	15,041
			(2.3)	*(0.6)*	*(0.2)*	
1202	Mahaxay	35,643	27.0	5.7	1.8	9,610
			(3.3)	*(1.0)*	*(0.4)*	
1203	Nongbok	46,967	22.4	4.6	1.4	10,536
			(3.2)	*(0.9)*	*(0.4)*	
1204	Hinboon	49,465	23.3	5.0	1.6	11,517
			(2.6)	*(0.7)*	*(0.3)*	
1205	Nhommalath	32,003	27.7	6.2	2.0	8,859
			(3.3)	*(1.1)*	*(0.5)*	
1206	Bualapha	31,206	43.7	11.1	3.9	13,635
			(3.7)	*(1.5)*	*(0.7)*	
1207	Nakai	25,050	42.6	12.6	5.1	10,678
			(5.3)	*(2.5)*	*(1.4)*	
1208	Xebangfay	28,198	28.9	6.4	2.0	8,162
			(4.4)	*(1.3)*	*(0.5)*	
1209	Xaybuathong	25,796	39.2	8.9	2.9	10,106
			(4.5)	*(1.6)*	*(0.6)*	
1210	Khounkham	21,613	27.0	6.1	2.0	5,831
			(5.0)	*(1.4)*	*(0.6)*	
1300	**Savanakhet**	**943,357**	**32.0**	**7.5**	**2.5**	**302,264**
			(1.8)	*(0.6)*	*(0.3)*	
1301	KaysonePhomvihane	118,366	13.4	2.7	0.8	15,913
			(2.6)	*(0.7)*	*(0.2)*	
1302	Outhoomphone	87,437	28.0	6.3	2.1	24,445
			(3.0)	*(0.9)*	*(0.4)*	
1303	Atsaphangthong	44,746	34.6	7.9	2.6	15,498
			(3.6)	*(1.2)*	*(0.5)*	
1304	Phine	64,184	42.4	11.0	3.9	27,206
			(2.9)	*(1.2)*	*(0.6)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
1305	Sepone	53,891	42.2	10.4	3.6	22,739
			(3.4)	*(1.3)*	*(0.6)*	
1306	Nong	28,432	54.0	13.8	4.8	15,347
			(4.1)	*(1.6)*	*(0.8)*	
1307	Thapangthong	40,119	40.6	10.1	3.6	16,281
			(3.1)	*(1.2)*	*(0.6)*	
1308	Songkhone	98,731	25.1	5.3	1.7	24,806
			(3.0)	*(0.8)*	*(0.3)*	
1309	Champhone	107,882	30.2	6.6	2.1	32,564
			(2.6)	*(0.8)*	*(0.3)*	
1310	Xonbuly	59,725	49.5	13.1	4.8	29,546
			(3.5)	*(1.4)*	*(0.7)*	
1311	Xaybuly	58,696	28.0	6.0	1.9	16,439
			(3.1)	*(0.9)*	*(0.4)*	
1312	Vilabuly	37,481	32.1	7.1	2.3	12,041
			(3.5)	*(1.1)*	*(0.5)*	
1313	Atsaphone	58,836	42.0	10.1	3.5	24,715
			(3.0)	*(1.2)*	*(0.6)*	
1314	Xayphoothong	45,723	17.1	3.4	1.0	7,838
			(3.5)	*(0.9)*	*(0.3)*	
1315	Phalanxay	39,108	43.2	10.7	3.7	16,882
			(4.1)	*(1.5)*	*(0.6)*	
1400	**Saravane**	**390,465**	**48.2**	**14.6**	**6.1**	**188,354**
			(3.4)	*(1.5)*	*(0.7)*	
1401	Saravane	98,145	50.3	15.3	6.3	49,348
			(3.7)	*(1.6)*	*(0.9)*	
1402	Ta oi	30,724	64.3	21.9	9.8	19,756
			(4.7)	*(2.5)*	*(1.5)*	
1403	Toomlarn	28,605	73.1	27.9	13.5	20,920
			(4.4)	*(2.9)*	*(1.9)*	
1404	Lakhonepheng	46,997	38.4	10.4	4.0	18,059
			(4.1)	*(1.5)*	*(0.7)*	
1405	Vapy	37,102	42.9	11.7	4.4	15,925
			(4.6)	*(1.7)*	*(0.8)*	
1406	Khongxedone	62,275	41.5	11.6	4.5	25,849
			(4.4)	*(1.7)*	*(0.8)*	
1407	Lao ngarm	70,941	42.6	11.9	4.6	30,235
			(4.1)	*(1.6)*	*(0.8)*	
1408	Samuoi	15,676	52.8	16.5	7.0	8,269
			(4.5)	*(2.1)*	*(1.2)*	

Code	Administrative Structure	Population	Poverty Headcount (P0)	Poverty Gap Index (P1)	Poverty Severity Index (P2)	Number of Poor Individuals
1500	**Sekong**	**109,872**	**31.4**	**9.3**	**3.9**	**34,469**
			(3.5)	*(1.4)*	*(0.7)*	
1501	Lamarm	33,773	28.0	8.0	3.2	9,455
			(3.5)	*(1.4)*	*(0.7)*	
1502	Kaleum	15,741	46.4	14.8	6.6	7,310
			(4.9)	*(2.3)*	*(1.4)*	
1503	Dakcheung	22,043	35.4	11.9	5.7	7,807
			(5.5)	*(2.4)*	*(1.5)*	
1504	Thateng	38,315	25.8	6.6	2.4	9,895
			(4.3)	*(1.5)*	*(0.7)*	
1600	**Champasack**	**676,856**	**22.8**	**5.6**	**2.1**	**154,054**
			(2.6)	*(0.9)*	*(0.4)*	
1601	Pakse	71,741	14.9	3.8	1.4	10,693
			(2.5)	*(0.8)*	*(0.4)*	
1602	Sanasomboon	67,902	22.5	5.5	2.0	15,299
			(3.5)	*(1.1)*	*(0.5)*	
1603	Bachiangchaleunsook	55,313	24.1	6.1	2.2	13,321
			(3.5)	*(1.2)*	*(0.6)*	
1604	Paksxong	78,792	15.5	3.9	1.5	12,213
			(2.9)	*(0.9)*	*(0.4)*	
1605	Pathoomphone	60,359	24.1	5.9	2.2	14,540
			(3.2)	*(1.1)*	*(0.5)*	
1606	Phonthong	92,957	23.1	5.7	2.1	21,498
			(3.4)	*(1.2)*	*(0.5)*	
1607	Champasack	62,235	26.6	6.9	2.6	16,579
			(3.8)	*(1.4)*	*(0.6)*	
1608	Sukhuma	56,514	26.5	6.4	2.2	14,959
			(4.0)	*(1.3)*	*(0.5)*	
1609	Moonlapamok	38,490	27.1	6.6	2.4	10,415
			(4.3)	*(1.4)*	*(0.6)*	
1610	Khong	92,553	26.5	6.4	2.3	24,566
			(3.8)	*(1.2)*	*(0.5)*	
1700	**Attapeu**	**135,813**	**18.9**	**4.6**	**1.6**	**25,652**
			(2.6)	*(0.8)*	*(0.3)*	
1701	Xaysetha	32,839	12.9	2.8	0.9	4,250
			(3.6)	*(1.0)*	*(0.4)*	
1702	Samakkhixay	34,528	13.4	3.1	1.1	4,616
			(2.8)	*(0.9)*	*(0.4)*	
1703	Sanamxay	33,399	26.8	6.6	2.3	8,964
			(4.3)	*(1.4)*	*(0.6)*	

1704	Sanxay	21,267	22.5	6.1	2.3	4,788
			(4.2)	*(1.4)*	*(0.7)*	
1705	Phouvong	13,780	22.0	5.2	1.8	3,032
			(4.6)	*(1.4)*	*(0.6)*	
1800	**Xaysomboune**	**79,452**	**27.8**	**6.3**	**2.1**	**22,048**
			(4.7)	*(1.5)*	*(0.6)*	
1801	Anouvong	20,966	23.2	5.1	1.7	4,861
			(6.8)	*(2.1)*	*(0.9)*	
1802	Thathom	19,007	25.8	5.5	1.8	4,913
			(5.4)	*(1.7)*	*(0.7)*	
1803	Longcheng	6,579	27.8	6.5	2.2	1,828
			(6.7)	*(2.2)*	*(0.9)*	
1804	Home	10,499	35.2	9.0	3.3	3,690
			(9.8)	*(3.6)*	*(1.6)*	
1805	Longsane	22,401	30.2	6.8	2.3	6,756
			(7.3)	*(2.2)*	*(0.9)*	

Source: Authors' calculations based on the 2012/13 LECS-5 and 2015 Lao PDR Census
Note 1: Robust standard errors are in parentheses.
Note 2: The provinces are shown in bold, while the associated districts are listed below their respective province.

Appendix 9: Non-Monetary Indicators (Education), by Province and District

Code	Province/District	Literacy Rate – 15-25 year-old [3]	Literacy Rate – 15-64 year-old [4]	Net School Enrolment Rate – Primary [5]	Net School Enrolment Rate – Lower Sec. [6]	Net School Enrolment Rate – Upper Sec. [7]	Net School Enrolment Rate – Primary [8]	Net School Enrolment Rate – Lower Sec. [9]	Net School Enrolment Rate – Upper Sec. [10]	Girl/Boy Ratio – Primary [11]	Girl/Boy Ratio – Lower Secondary [12]	Girl/Boy Ratio – Upper Secondary [13]	Proportion of Out-of-School 6-11 year-old Children [14]	Proportion of Out-of-School 12-18 year-old Children [15]	Number of Out-of-School 6-11 year-old Children [16]	Number of Out-of-School 12-18 year-old Children [17]
100	**Vientiane Capital**	**99.1**	**97.6**	**80.5**	**55.3**	**43.9**	**93.8**	**66.0**	**83.8**	**0.94**	**1.00**	**0.99**	**13.4**	**27.6**	**9,689**	**25,198**
101	Chanthabuly	99.6	99.2	80.0	58.2	56.0	93.6	70.9	108.0	0.97	0.97	0.99	12.9	19.8	673	1,434
102	Sikhottabong	99.4	98.8	84.9	58.6	45.3	99.4	70.0	85.0	0.94	0.99	1.08	9.1	23.1	950	3,054
103	Xaysetha	99.3	98.9	73.9	52.4	49.8	86.4	62.3	94.2	0.95	1.02	0.94	19.3	28.2	1,815	3,477
104	Sisattanak	99.6	99.3	78.9	59.3	57.9	91.2	70.9	115.3	0.95	1.02	0.99	15.5	22.7	729	1,446
105	Naxaithong	99.0	96.9	84.9	56.2	32.2	96.7	66.3	56.2	0.93	0.99	0.98	10.3	31.3	769	2,654
106	Xaythany	98.7	95.8	77.6	53.5	44.2	91.6	64.9	89.6	0.91	0.99	0.95	15.7	28.5	2,844	6,557
107	Hadxaifong	99.1	98.2	80.9	53.6	41.5	93.3	63.6	75.1	0.92	0.99	1.07	12.6	29.6	1,073	3,101
108	Sangthong	98.1	94.2	83.6	51.3	20.0	98.7	60.1	31.4	0.98	0.99	0.88	10.7	36.6	349	1,422
109	Mayparkngum	98.7	95.8	86.8	57.6	23.9	99.5	66.1	39.1	0.93	0.99	0.99	9.3	32.5	487	2,053
200	**Phongsaly**	**77.4**	**57.1**	**66.9**	**26.4**	**10.9**	**98.0**	**34.4**	**15.7**	**0.87**	**0.89**	**1.04**	**30.6**	**44.2**	**7,735**	**11,483**
201	Phongsaly	76.2	65.3	62.6	30.2	16.7	86.8	38.8	29.2	0.88	0.99	1.07	33.8	41.8	989	1,215
202	May	87.8	63.6	75.1	23.7	8.9	118.2	35.0	11.2	0.89	0.71	1.07	24.2	37.5	997	1,639
203	Khua	87.4	67.9	70.5	27.1	9.8	108.9	34.7	13.9	0.87	0.98	1.38	26.1	35.7	980	1,339
204	Samphanh	73.6	55.7	59.2	17.1	9.7	94.2	23.8	13.5	0.88	0.70	0.81	39.1	43.4	1,559	1,501
205	Boonneua	75.6	57.3	71.3	36.0	13.6	92.3	44.5	19.1	0.88	0.94	0.91	23.3	46.8	665	1,457
206	Nhotou	65.7	41.5	63.6	24.7	8.2	84.5	31.4	11.2	0.83	0.92	1.07	35.1	59.7	1,479	2,868
207	Boontai	76.5	51.8	66.1	28.8	12.9	97.4	35.7	17.7	0.87	0.97	1.04	31.2	41.3	1,066	1,464

Code	Province/District	Literacy Rate –15-25 year-old [3]	Literacy Rate – 15-64 year-old [4]	Net School Enrolment Rate – Primary [5]	Net School Enrolment Rate – Lower Sec. [6]	Net School Enrolment Rate – Upper Sec. [7]	Net School Enrolment Rate – Primary [8]	Net School Enrolment Rate – Lower Sec. [9]	Net School Enrolment Rate – Upper Sec. [10]	Girl/Boy Ratio – Primary [11]	Girl/Boy Ratio – Lower Secondary [12]	Girl/Boy Ratio – Upper Secondary [13]	Proportion of Out-of-School 6-11 year-old Children [14]	Proportion of Out-of-School 12-18 year-old Children [15]	Number of Out-of-School 6-11 year-old Children [16]	Number of Out-of-School 12-18 year-old Children [17]
300	**Luangnamtha**	**82.5**	**58.5**	**72.2**	**37.9**	**18.7**	**98.3**	**48.5**	**28.4**	**0.92**	**0.88**	**0.89**	**25.6**	**36.7**	**6,120**	**9,278**
301	Namtha	90.7	76.8	75.3	49.6	32.7	96.0	62.2	53.6	0.91	0.94	1.00	19.8	29.2	1,254	2,248
302	Sing	81.3	54.0	76.3	37.8	11.1	103.9	47.8	16.0	0.93	0.90	0.75	21.5	38.3	1,135	2,122
303	Long	65.2	30.6	64.0	18.6	6.9	96.1	24.5	9.1	0.89	0.68	0.75	36.2	50.5	1,887	2,614
304	Viengphoukha	80.7	53.6	68.3	41.4	18.0	94.1	56.1	24.4	0.89	0.88	0.80	29.6	32.7	1,102	1,215
305	Nalae	94.1	66.0	76.6	37.6	17.7	101.9	47.7	24.1	0.98	0.83	0.69	21.8	34.3	742	1,079
400	**Oudomxay**	**87.5**	**66.5**	**74.7**	**38.0**	**18.4**	**104.5**	**51.1**	**27.5**	**0.94**	**0.92**	**0.86**	**22.6**	**33.9**	**9,995**	**16,672**
401	Xay	93.5	78.6	78.7	47.6	27.2	103.1	63.4	43.8	0.98	0.97	0.88	17.7	29.8	1,817	3,620
402	La	78.5	56.7	66.1	35.5	18.9	86.8	44.2	26.2	0.83	0.97	1.08	31.6	45.7	674	1,147
403	Namor	86.8	61.5	80.2	32.2	13.5	111.9	43.1	19.8	0.94	0.89	0.76	17.6	37.3	1,010	2,244
404	Nga	83.9	58.5	70.6	23.6	9.2	108.0	34.7	13.2	0.94	0.99	0.88	27.3	37.4	1,313	1,762
405	Beng	93.6	78.6	78.1	53.2	22.8	100.1	67.3	31.8	0.94	0.92	0.89	15.8	28.5	788	1,784
406	Hoon	84.1	58.8	73.3	35.8	15.9	106.1	48.7	22.4	0.95	0.87	0.80	25.1	34.0	2,837	4,289
407	Pakbeng	81.5	55.5	67.5	23.6	10.5	104.0	36.1	15.3	0.93	0.88	0.72	31.3	37.7	1,556	1,826
500	**Bokeo**	**86.0**	**67.0**	**72.6**	**37.1**	**16.7**	**98.2**	**49.5**	**26.2**	**0.95**	**0.91**	**0.79**	**24.5**	**37.3**	**6,053**	**9,378**
501	Huoixai	90.7	77.6	73.4	43.1	25.1	98.3	58.0	40.3	0.93	0.89	0.82	23.1	32.2	2,058	3,303
502	Tonpheung	85.4	70.3	62.8	36.3	11.2	79.5	45.7	19.8	0.95	0.97	0.84	32.3	50.4	1,164	2,019
503	Meung	68.5	39.4	67.6	29.3	10.3	91.3	37.9	15.8	0.93	0.84	0.56	31.0	40.2	769	788
504	Phaoudom	83.9	57.3	75.9	30.7	10.9	108.2	43.0	14.6	0.97	0.95	0.76	22.3	36.4	1,505	2,283
505	Paktha	84.4	60.3	78.6	37.1	10.4	103.5	47.3	15.1	0.95	0.90	0.64	19.2	37.1	557	985
600	**Luangprabang**	**93.9**	**79.8**	**81.9**	**45.4**	**22.9**	**108.9**	**57.4**	**37.5**	**0.94**	**0.89**	**0.74**	**15.2**	**29.4**	**8,945**	**19,383**
601	Luangprabang	98.2	94.4	78.2	52.7	40.2	96.3	64.9	77.7	0.92	0.97	0.79	16.9	27.9	1,440	2,907
602	Xiengngeun	94.6	79.6	83.6	45.8	21.3	115.1	56.4	32.9	0.94	0.90	0.62	13.9	28.2	595	1,521

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603	Nan	95.0	81.0	81.4	48.9	21.7	104.6	59.5	33.2	0.96	0.94	0.80	14.1	30.5	509	1,344
604	Parkou	92.2	76.5	79.5	39.3	18.8	106.2	48.1	32.6	0.90	0.87	0.81	18.5	35.2	636	1,280
605	Nambak	89.5	71.6	79.5	46.2	20.7	106.0	57.7	30.9	0.93	0.96	0.86	17.7	32.8	1,573	3,664
606	Ngoi	94.0	77.3	82.4	40.7	15.0	114.2	52.5	21.6	0.99	0.85	0.61	15.2	29.4	668	1,379
607	Pakxeng	94.1	76.6	85.0	42.7	15.7	119.0	57.2	21.7	0.93	0.87	0.66	12.9	25.1	482	1,005
608	Phonxay	93.5	67.7	85.5	41.1	16.0	114.3	53.2	21.8	0.98	0.88	0.65	12.2	26.2	717	1,344
609	Chomphet	94.2	82.8	82.1	41.4	18.5	106.9	51.7	29.9	0.96	0.92	0.77	15.6	36.8	660	1,757
610	Viengkham	95.0	80.3	87.6	47.2	21.3	118.3	59.4	29.9	0.93	0.79	0.57	9.8	23.9	471	1,252
611	Phoukhoune	96.2	75.9	86.0	53.0	21.2	112.7	71.6	28.3	0.97	0.83	0.58	10.7	21.7	409	899
612	Phonthong	82.8	60.0	75.7	31.1	8.4	104.8	41.4	12.3	0.94	0.70	0.54	23.3	36.0	785	1,031
700	**Huaphanh**	**92.4**	**78.5**	**78.3**	**43.2**	**25.1**	**115.1**	**61.2**	**34.5**	**0.92**	**0.84**	**0.72**	**19.5**	**24.1**	**8,229**	**13,000**
701	Xamneua	92.9	82.9	79.0	47.9	30.4	107.6	64.6	45.1	0.92	0.84	0.82	17.5	24.5	1,347	2,410
702	Xiengkhor	90.8	76.7	75.3	35.7	22.5	121.8	56.2	28.2	0.89	0.75	0.80	23.8	26.4	798	1,225
703	Huim	96.9	81.3	85.4	60.6	32.3	112.2	77.9	39.6	1.02	0.98	0.89	12.3	17.5	218	383
704	Viengxay	96.4	88.2	80.5	54.9	36.6	113.5	72.0	48.9	0.94	0.91	0.74	15.6	19.7	573	1,176
705	Huameuang	94.8	79.5	83.5	35.4	17.0	124.3	48.8	24.4	0.93	0.91	0.71	15.5	28.0	821	1,737
706	Xamtay	94.4	78.1	81.3	40.1	22.1	124.9	61.2	30.9	0.98	0.82	0.55	17.7	19.8	1,081	1,475
707	Sopbao	87.8	76.9	75.6	44.4	27.3	108.6	63.8	35.8	0.83	0.84	0.63	22.8	27.0	767	1,246
708	Add	88.0	73.9	75.7	39.7	21.8	117.7	60.2	29.6	0.86	0.77	0.75	21.8	24.4	833	1,246
709	Kuane	89.1	64.5	75.1	35.0	13.8	112.8	53.4	20.3	0.91	0.73	0.57	23.5	26.8	1,076	1,264
710	Sone	92.2	71.0	68.3	44.1	24.4	99.5	60.4	30.8	0.95	0.87	0.78	27.4	26.0	715	838
800	**Xayaboury**	**97.8**	**92.9**	**77.4**	**46.7**	**18.0**	**92.0**	**55.3**	**30.4**	**0.95**	**0.97**	**0.91**	**16.5**	**40.8**	**6,961**	**20,179**
801	Xayabury	98.0	94.4	75.2	45.8	23.1	89.1	54.3	38.8	0.94	0.92	0.95	19.0	40.9	1,572	4,058

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802	Khop	98.6	91.7	79.5	44.6	13.9	99.5	53.8	24.3	1.01	1.00	0.70	16.5	37.6	378	979
803	Hongsa	97.2	89.4	68.2	45.9	16.4	79.8	57.4	29.1	0.96	0.91	0.70	24.3	44.4	782	1,655
804	Ngeun	97.3	88.7	80.6	48.3	13.5	99.7	54.5	22.4	1.01	1.03	0.98	16.7	36.8	343	837
805	Xienghone	98.0	88.8	77.9	42.1	11.5	93.0	49.8	20.2	0.94	1.01	0.82	17.2	45.9	648	1,958
806	Phiang	98.0	94.6	78.9	47.9	17.2	92.5	57.7	31.1	0.95	0.97	0.96	13.8	40.1	938	3,194
807	Parklai	99.0	96.8	81.1	49.6	20.0	94.8	57.3	31.5	0.90	0.98	0.98	12.9	40.5	909	3,568
808	Kenethao	98.5	94.6	78.3	52.5	18.5	89.3	61.5	31.3	0.94	0.96	1.04	14.0	38.9	529	1,783
809	Botene	99.0	97.9	69.2	57.3	27.0	79.8	64.0	42.6	0.95	1.26	0.79	23.5	32.3	339	559
810	Thongmyxay	99.0	94.8	87.2	71.2	34.6	92.1	82.5	59.4	1.01	1.04	0.90	3.9	17.9	31	176
811	Xaysathan	86.9	66.4	76.8	19.2	3.5	105.2	25.6	6.3	0.99	0.68	0.56	18.9	54.0	492	1,412
900	**Xienkhuang**	**96.8**	**87.2**	**83.3**	**52.9**	**30.2**	**107.1**	**68.1**	**47.5**	**0.91**	**0.86**	**0.86**	**13.0**	**23.0**	**4,500**	**9,351**
901	Pek	98.4	92.4	83.4	60.1	40.8	99.5	75.1	72.0	0.91	0.94	0.96	11.4	19.0	972	2,007
902	Kham	96.6	86.7	82.5	52.8	30.6	107.2	67.1	43.9	0.91	0.90	0.91	13.8	24.2	922	2,008
903	Nonghed	97.7	84.8	84.5	45.2	18.2	117.4	62.9	25.6	0.91	0.81	0.67	13.5	24.4	886	1,825
904	Khoune	95.0	82.8	81.8	50.2	25.4	105.2	64.4	39.5	0.88	0.78	0.74	14.4	27.4	719	1,562
905	Morkmay	88.4	65.2	83.4	46.4	16.1	112.0	61.2	25.1	0.91	0.80	0.52	14.5	22.3	402	589
906	Phoukoud	98.0	90.9	83.7	53.7	31.6	107.2	69.6	45.0	0.95	0.82	0.85	11.7	23.3	399	992
907	Phaxay	95.3	86.1	85.3	61.6	33.5	101.5	74.6	46.5	0.89	0.89	0.73	12.0	21.1	200	368
1000	**Vientiane Pro**	**96.6**	**90.4**	**79.5**	**53.6**	**26.8**	**95.9**	**65.5**	**44.3**	**0.94**	**0.92**	**0.79**	**14.7**	**30.3**	**7,499**	**18,129**
1001	Phonhong	97.6	93.6	80.3	58.4	34.2	91.3	71.4	58.0	0.91	0.97	0.88	11.1	26.2	796	2,197
1002	Thoulakhom	97.2	92.7	73.6	54.4	32.0	87.0	65.1	55.3	0.90	0.97	0.86	19.1	32.2	1,060	2,137
1003	Keooudom	98.8	96.4	80.6	58.1	37.9	91.9	68.6	69.2	1.05	0.94	0.97	10.9	26.4	178	569
1004	Kasy	95.1	81.7	79.7	52.0	19.1	97.6	62.3	29.7	1.00	0.93	0.73	16.3	32.1	903	1,818

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1005	Vangvieng	96.9	88.6	80.7	60.3	31.4	98.5	76.0	50.0	0.91	0.90	0.76	12.9	22.7	875	1,877
1006	Feuang	97.0	89.5	77.9	52.3	24.0	95.1	65.8	38.7	0.96	0.83	0.68	15.8	31.6	887	2,107
1007	Xanakharm	97.5	95.3	84.2	51.4	13.0	95.5	59.2	25.8	0.94	1.04	0.88	11.2	39.9	496	2,011
1008	Mad	95.1	87.6	84.1	46.7	22.0	107.7	57.1	33.1	0.96	0.87	0.62	9.8	31.0	282	1,074
1009	viengkham	99.4	97.7	80.5	59.5	59.4	88.9	68.4	101.5	0.95	0.92	0.84	12.6	19.2	205	408
1010	Hinherb	98.0	92.2	78.2	51.1	25.0	102.0	63.2	36.8	0.90	0.92	0.82	18.7	29.3	687	1,351
1013	Meun	92.3	78.1	78.4	44.4	13.6	99.6	56.8	20.6	0.95	0.85	0.55	18.0	38.1	1,130	2,580
1100	**Borikhamxay**	**95.6**	**88.0**	**80.0**	**47.0**	**20.3**	**101.3**	**57.9**	**32.1**	**0.94**	**0.92**	**0.86**	**15.4**	**35.1**	**5,526**	**15,048**
1101	Pakxane	98.8	97.3	77.2	56.9	38.0	88.0	66.8	65.2	1.01	0.93	1.05	14.7	29.3	656	1,720
1102	Thaphabath	99.4	98.4	84.0	61.1	23.7	92.0	72.0	40.8	0.98	1.01	0.87	8.7	32.1	233	980
1103	Pakkading	98.6	94.7	80.8	45.3	15.6	96.7	53.9	23.0	0.96	0.90	0.76	14.8	45.9	886	3,453
1104	Bolikhanh	93.7	85.3	78.0	46.8	19.2	96.4	58.2	31.8	0.88	0.90	0.68	15.9	35.7	1,107	2,745
1105	Khamkeuth	94.8	79.3	81.2	47.9	19.1	110.0	61.2	28.2	0.94	0.96	0.90	15.6	30.6	1,403	3,666
1106	Viengthong	89.1	71.3	77.7	32.9	12.7	106.7	42.0	18.6	0.92	0.84	0.79	20.2	39.5	961	1,940
1107	Xaychamphone	91.8	75.8	84.9	32.8	10.2	121.9	44.5	13.5	0.94	0.73	0.49	14.1	28.9	280	544
1200	**Khammuane**	**93.8**	**83.5**	**73.5**	**36.1**	**16.0**	**101.6**	**44.7**	**25.7**	**0.93**	**1.00**	**0.97**	**21.9**	**42.4**	**10,714**	**27,277**
1201	Thakhek	96.5	91.8	68.5	44.4	26.5	87.8	55.1	45.8	0.89	1.03	1.10	22.7	38.8	2,091	5,363
1202	Mahaxay	91.8	71.9	80.8	31.3	11.0	113.8	38.9	16.9	0.97	1.09	0.89	15.7	44.8	791	2,991
1203	Nongbok	98.2	92.7	72.4	48.2	17.6	82.9	56.9	30.4	0.87	0.96	0.98	19.1	46.0	889	3,245
1204	Hinboon	96.6	87.4	80.7	35.1	12.4	107.1	42.9	19.1	0.91	1.00	0.76	15.9	45.9	911	3,297
1205	Nhommalath	86.2	67.8	70.5	30.0	11.7	108.6	38.6	15.9	1.04	1.02	0.83	27.4	40.9	1,263	2,362
1206	Bualapha	92.8	75.7	63.4	25.4	7.4	96.8	32.2	10.3	0.89	0.99	0.80	35.7	44.7	1,907	2,492
1207	Nakai	85.9	65.9	68.9	23.6	8.0	115.7	30.1	11.6	0.90	0.97	0.87	29.9	40.9	1,120	1,949

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1208	Xebangfay	90.6	82.3	72.0	39.6	18.6	90.6	47.7	29.9	0.99	0.98	1.07	20.4	45.2	726	2,181
1209	Xaybuathong	91.4	75.7	83.3	31.1	9.4	113.9	39.1	12.5	0.98	0.87	0.60	14.1	42.2	619	2,015
1210	**Khounkham**	**97.2**	**91.9**	**82.1**	**39.4**	**18.3**	**119.7**	**50.1**	**26.1**	**0.91**	**1.00**	**0.96**	**15.3**	**35.1**	**397**	**1,382**
1300	Savanakhet	85.5	77.1	68.3	33.3	15.0	94.4	42.6	24.3	0.92	1.01	1.04	28.4	46.4	34,029	68,823
1301	KaysonePhomvihane	98.3	95.9	74.1	52.4	37.4	89.9	65.9	70.5	0.95	1.00	1.17	18.5	32.8	1,996	5,082
1302	Outhoomphone	90.5	81.1	68.3	34.4	13.3	98.3	44.1	20.1	0.96	1.06	0.99	27.3	46.6	2,663	6,596
1303	Atsaphangthong	87.5	75.4	75.5	40.3	19.4	102.3	52.2	29.9	0.96	1.05	1.06	19.9	39.9	1,123	3,050
1304	Phine	57.4	47.6	53.1	17.3	6.2	75.7	22.2	9.6	0.90	0.92	0.84	45.5	62.3	4,688	6,232
1305	Sepone	57.6	40.2	51.6	16.7	8.7	78.9	23.0	12.1	0.80	0.90	0.87	47.6	50.4	4,489	3,945
1306	Nong	43.5	25.5	48.6	8.3	3.6	79.4	14.1	5.5	0.68	0.67	0.61	51.1	52.5	2,694	2,114
1307	Thapangthong	72.5	59.7	65.9	17.6	4.9	93.5	23.3	7.1	0.88	0.90	1.04	32.7	59.6	2,097	4,171
1308	Songkhone	98.5	95.2	79.7	34.0	10.5	100.6	41.2	17.3	0.94	1.07	1.04	16.5	54.0	1,771	7,654
1309	Champhone	94.8	87.2	77.8	41.4	13.6	105.3	52.5	21.3	0.94	1.02	1.07	17.8	41.9	2,130	7,538
1310	Xonbuly	75.8	64.0	67.4	27.1	9.8	98.8	35.5	13.8	0.95	0.99	0.95	30.3	49.0	2,715	5,320
1311	Xaybuly	95.7	87.2	77.9	40.3	15.4	101.5	49.4	23.1	0.92	1.12	1.00	17.1	44.1	1,108	4,058
1312	Vilabuly	78.1	59.0	66.9	30.5	11.1	102.9	41.9	14.6	0.91	0.94	0.78	31.7	36.0	1,783	2,190
1313	Atsaphone	87.6	73.0	74.6	36.9	15.9	104.4	47.6	21.7	0.94	1.04	0.91	22.1	41.3	1,848	4,453
1314	Xayphoothong	98.5	93.2	81.2	50.2	17.6	98.5	61.3	28.4	1.00	0.99	0.97	12.8	39.0	563	2,483
1315	Phalanxay	69.5	57.8	57.4	17.9	6.2	86.1	25.7	9.5	0.92	1.00	0.79	41.2	57.6	2,361	3,937
1400	**Saravane**	**86.7**	**77.5**	**69.4**	**25.7**	**10.4**	**99.4**	**33.2**	**15.9**	**0.92**	**0.94**	**0.90**	**27.6**	**50.6**	**15,311**	**33,738**
1401	Saravane	84.1	76.7	63.7	26.4	12.9	95.8	34.8	20.5	0.94	0.98	0.98	32.6	50.4	4,357	8,952
1402	Ta oi	67.5	45.4	60.3	11.5	3.4	96.5	18.8	5.1	0.83	0.64	0.33	39.8	46.0	2,319	2,258
1403	Toomlarn	57.0	43.4	52.0	12.8	4.1	80.8	19.3	6.1	0.77	0.45	0.54	46.0	59.5	2,418	3,092

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1404	Lakhonepheng	96.3	91.6	75.7	27.5	7.7	99.1	33.6	11.6	0.96	0.87	0.64	19.8	59.2	1,064	4,265
1405	Vapy	95.0	87.8	76.0	35.8	14.7	99.7	43.5	22.0	0.97	0.96	0.99	18.5	47.5	854	2,985
1406	Khongxedone	94.5	89.7	75.2	32.3	14.2	98.3	39.1	21.8	0.94	1.01	0.92	21.2	51.3	1,539	4,897
1407	Lao ngarm	92.1	81.5	79.7	26.2	9.4	111.3	32.7	13.3	0.97	1.15	0.99	18.2	49.8	1,935	6,574
1408	Samuoi	75.1	42.1	71.2	20.5	5.1	114.2	33.5	8.3	0.87	0.75	0.85	26.9	27.9	825	715
1500	**Sekong**	**90.9**	**72.3**	**71.3**	**31.4**	**15.9**	**107.5**	**46.1**	**23.4**	**0.97**	**0.90**	**0.92**	**26.7**	**31.2**	**4,965**	**5,960**
1501	Lamarm	92.7	80.6	74.6	47.2	27.6	98.6	64.5	42.3	0.93	0.86	0.96	21.8	27.8	1,101	1,560
1502	Kaleum	83.5	61.9	66.8	8.8	4.1	112.0	18.0	5.7	0.97	0.71	0.52	31.7	35.1	963	874
1503	Dakcheung	92.6	72.2	69.2	22.1	10.9	110.8	37.3	14.8	0.98	0.88	0.83	31.1	28.3	1,319	1,041
1504	Thateng	91.0	68.3	72.3	32.2	12.7	110.2	46.5	17.9	0.98	0.99	0.93	25.1	33.8	1,582	2,485
1600	**Champasack**	**94.9**	**91.2**	**77.0**	**34.9**	**18.1**	**100.4**	**41.6**	**30.3**	**0.94**	**0.98**	**0.92**	**18.7**	**47.5**	**15,062**	**51,842**
1601	Pakse	99.1	98.1	85.7	55.1	46.9	101.9	65.8	84.6	0.89	0.97	0.97	7.6	24.1	529	2,378
1602	Sanasomboon	92.2	87.0	67.9	32.3	16.3	90.0	39.3	27.6	1.01	1.04	0.92	26.2	53.2	1,869	5,677
1603	Bachiangchaleunsook	92.2	86.9	72.1	30.9	17.5	99.3	38.1	29.4	0.96	0.98	0.90	23.8	48.5	1,657	4,672
1604	Paksxong	91.4	84.6	76.3	35.8	17.5	106.8	44.6	27.2	0.95	1.03	0.99	21.0	40.0	2,254	5,531
1605	Pathoomphone	93.7	88.2	73.6	30.6	12.2	97.5	36.3	18.5	0.95	1.00	0.98	22.2	52.7	1,642	5,244
1606	Phonthong	98.2	96.3	79.5	36.3	17.0	96.1	42.6	28.2	0.94	0.96	0.86	16.2	52.5	1,543	6,947
1607	Champasack	96.3	93.3	82.1	33.1	14.6	107.1	38.2	24.4	0.88	1.01	0.89	14.1	50.8	978	5,265
1608	Sukhuma	92.0	86.4	73.8	28.8	9.9	95.4	33.1	15.2	0.91	0.97	0.75	21.6	56.4	1,632	5,432
1609	Moonlapamok	93.9	88.1	79.2	30.0	8.0	104.6	34.8	12.3	0.96	0.90	0.84	18.4	52.9	947	3,422
1610	Khong	97.4	94.8	79.2	34.4	14.7	103.2	40.7	25.2	0.97	0.95	0.94	16.5	46.9	2,011	7,274
1700	**Attapeu**	**87.6**	**76.2**	**70.1**	**31.3**	**14.9**	**106.2**	**41.6**	**22.1**	**0.95**	**0.96**	**0.86**	**27.6**	**37.6**	**5,369**	**8,816**
1701	Xaysetha	81.7	71.4	68.2	31.3	13.8	107.8	39.9	20.3	0.93	1.04	0.81	30.5	41.5	1,226	2,453

Code	Province/District	Literacy Rate –15-25 year-old [3]	Literacy Rate – 15-64 year-old [4]	Net School Enrolment Rate – Primary [5]	Net School Enrolment Rate – Lower Sec. [6]	Net School Enrolment Rate – Upper Sec. [7]	Net School Enrolment Rate – Primary [8]	Net School Enrolment Rate – Lower Sec. [9]	Net School Enrolment Rate – Upper Sec. [10]	Girl/Boy Ratio – Primary [11]	Girl/Boy Ratio – Lower Secondary [12]	Girl/Boy Ratio – Upper Secondary [13]	Proportion of Out-of-School 6-11 year-old Children [14]	Proportion of Out-of-School 12-18 year-old Children [15]	Number of Out-of-School 6-11 year-old Children [16]	Number of Out-of-School 12-18 year-old Children [17]
1702	Samakkhixay	95.5	90.2	79.3	47.6	27.5	107.6	60.6	43.1	0.93	0.93	0.94	16.8	26.7	754	1,543
1703	Sanamxay	92.2	77.3	75.6	27.4	10.3	116.3	38.0	13.5	0.96	0.99	0.84	23.7	37.1	1,229	2,194
1704	Sanxay	84.5	64.3	58.7	20.2	8.1	92.5	29.0	11.8	0.96	0.89	0.59	36.2	43.7	1,343	1,538
1705	Phouvong	75.7	64.2	59.9	18.5	6.7	99.5	28.6	10.0	0.97	0.86	0.79	39.9	46.8	817	1,088
1800	**Xaysomboune**	**93.7**	**74.4**	**80.9**	**52.2**	**24.3**	**105.5**	**65.5**	**33.9**	**0.91**	**0.89**	**0.68**	**16.8**	**23.6**	**2,148**	**3,309**
1801	Anouvong	94.3	74.4	84.4	53.1	27.4	111.6	68.0	37.7	0.99	0.93	0.64	13.1	17.9	459	656
1802	Thathom	94.9	80.4	82.5	49.5	24.0	109.7	60.6	34.4	0.87	0.82	0.76	15.6	27.8	434	978
1803	Longcheng	91.2	73.3	78.7	36.9	8.9	107.1	47.6	11.7	0.94	0.76	0.65	20.4	30.9	222	291
1804	Home	91.3	62.6	78.0	56.6	24.9	99.9	70.7	31.8	0.84	0.79	0.46	20.0	21.9	369	424
1805	Longsane	93.6	74.1	78.6	55.3	25.2	98.8	69.6	36.1	0.88	0.98	0.76	18.5	24.3	664	960

Source: Authors' calculations based on 2015 Lao PDR Census

Note: The provinces are shown in bold, while the associated districts are listed below their respective province.

Appendix 10: Non-Monetary Indicators (Others), by Province and District

Code	Province/District	Employment Rate [18]	Self-employment [19]	Youth Unemployment Rate [20]	Unemployment Rate [21]	Proportion of Non-Agric. Wage Earner [22]	Proportion of Non-Agric. Own-Account Worker [22]	Dependency Rate [24]	Female in Wage Emp. Non Agric. [25]	Proportion of Married 17-year-old Girls	Improved Sanitation [27]	Improved Water Source [28]	Not Using Firewood [29]	Using Electricity [30]	Have a Phone [31]
100	**Vientiane Capital**	**68.8**	**53.4**	**9.9**	**2.7**	**46.2**	**27.6**	**29.0**	**38.6**	**8.2**	**97.6**	**97.2**	**70.9**	**98.3**	**98.2**
101	Chanthabuly	64.4	40.5	9.9	2.2	59.4	40.2	25.2	41.1	2.8	98.3	98.7	93.1	97.4	98.5
102	Sikhottabong	64.8	45.6	13.1	3.6	54.0	41.8	28.0	39.3	4.4	98.5	98.4	78.2	98.7	98.7
103	Xaysetha	63.9	40.2	13.1	3.1	59.5	32.2	27.1	39.5	6.8	97.8	97.9	86.9	98.0	98.1
104	Sisattanak	60.8	33.6	15.2	3.4	65.9	33.4	25.8	41.4	3.2	96.9	97.8	93.7	97.1	97.7
105	Naxaithong	76.4	60.5	7.3	2.3	39.0	24.6	31.7	34.7	12.0	97.8	97.4	44.2	98.9	98.4
106	Xaythany	66.1	52.5	11.5	3.2	46.8	23.5	30.4	37.4	8.7	97.0	96.6	51.9	98.3	98.3
107	Hadxaifong	72.7	56.3	9.1	2.4	43.2	24.0	28.0	37.1	10.8	98.1	98.3	88.0	98.8	98.0
108	Sangthong	89.9	91.9	1.2	0.3	7.5	4.7	33.6	33.4	20.7	97.6	90.3	25.3	98.7	97.6
109	Mayparkngum	86.9	89.4	1.6	0.5	10.1	8.6	34.0	36.0	14.9	95.6	94.3	65.5	98.8	97.5
200	**Phongsaly**	**87.0**	**90.6**	**1.8**	**0.5**	**9.1**	**5.1**	**40.9**	**42.0**	**24.8**	**40.6**	**80.7**	**2.7**	**57.6**	**84.3**
201	Phongsaly	87.2	77.1	2.7	0.5	22.7	8.6	40.1	45.3	13.8	40.0	81.6	9.8	54.4	76.4
202	May	85.5	92.2	2.1	0.5	7.7	3.4	42.3	32.7	22.1	36.7	76.3	1.1	34.0	83.6
203	Khua	86.0	92.4	2.4	0.7	7.4	7.9	39.9	36.5	19.2	46.7	88.3	1.1	66.5	86.1
204	Samphanh	87.5	92.6	1.2	0.2	7.3	3.8	45.7	34.9	26.0	21.8	80.8	0.9	46.3	81.2
205	Boonneua	86.3	88.4	3.7	0.5	11.1	4.8	39.1	46.9	34.1	47.2	89.0	5.3	77.8	88.4
206	Nhotou	89.4	95.2	0.5	0.6	4.5	3.7	38.3	45.2	31.9	47.8	70.1	1.0	56.3	88.2
207	Boontai	86.7	93.6	1.1	0.3	6.3	4.3	41.5	46.6	23.7	41.8	82.6	1.3	71.4	84.5

Code	Province/District	Employment Rate [18]	Self-employment [19]	Youth Unemployment Rate [20]	Unemployment Rate [21]	Proportion of Non-Agric. Wage Earner [22]	Proportion of Non-Agric. Own-Account Worker [22]	Dependency Rate [24]	Female in Wage Emp. Non Agric. [25]	Proportion of Married 17-year-old Girls	Improved Sanitation [27]	Improved Water Source [28]	Not Using Firewood [29]	Using Electricity [30]	Have a Phone [31]
300	**Luangnamtha**	**85.1**	**88.8**	**2.9**	**0.7**	**10.4**	**6.7**	**38.8**	**35.9**	**19.8**	**70.4**	**94.7**	**2.7**	**86.5**	**89.9**
301	Namtha	80.4	80.7	7.5	1.1	19.1	9.2	36.2	38.2	17.1	87.5	97.1	4.8	90.9	94.2
302	Sing	86.3	91.2	1.3	0.8	6.3	7.0	38.3	33.9	22.2	75.7	93.7	3.5	91.5	90.9
303	Long	91.6	95.0	0.2	0.1	4.9	3.9	40.9	31.5	33.2	44.3	96.0	1.2	80.6	89.9
304	Viengphoukha	83.3	90.9	1.3	0.3	8.7	4.7	41.1	31.1	13.1	67.3	88.2	1.0	83.2	82.8
305	Nalae	87.0	91.8	2.9	0.4	7.9	6.7	39.9	35.0	12.6	64.5	95.2	0.8	79.9	85.8
400	**Oudomxay**	**82.4**	**90.1**	**3.4**	**0.9**	**9.5**	**6.6**	**40.3**	**31.5**	**20.9**	**59.0**	**86.3**	**2.9**	**71.7**	**86.4**
401	Xay	76.7	81.8	6.8	1.7	17.8	13.1	37.6	33.8	16.9	76.8	92.1	7.3	83.7	92.4
402	La	85.7	91.4	2.5	0.5	8.5	3.3	37.1	30.9	24.3	62.1	92.3	2.6	75.0	93.1
403	Namor	85.7	94.0	2.2	0.4	5.9	4.5	40.8	28.1	26.7	57.7	85.9	1.1	71.5	88.4
404	Nga	84.7	93.9	1.7	0.5	5.9	4.4	43.6	32.0	23.0	44.4	88.8	0.7	58.3	80.9
405	Beng	83.9	92.2	2.5	0.7	6.6	3.8	38.0	31.7	17.8	66.2	80.4	1.2	88.0	89.2
406	Hoon	84.0	92.9	2.8	0.6	6.9	4.6	41.8	27.5	23.1	50.6	85.0	1.5	66.1	83.0
407	Pakbeng	83.8	92.2	2.8	1.1	7.3	6.2	43.9	29.9	19.0	39.9	75.9	2.4	45.4	75.2
500	**Bokeo**	**83.3**	**84.7**	**3.9**	**1.2**	**13.0**	**9.0**	**38.8**	**35.1**	**24.3**	**80.4**	**91.6**	**8.9**	**90.2**	**87.8**
501	Huoixai	77.5	80.2	8.2	2.0	18.7	14.5	37.4	33.2	17.5	86.2	92.6	11.5	96.7	93.0
502	Tonpheung	87.4	74.9	2.6	1.2	17.1	7.6	33.8	39.2	36.2	89.5	94.0	17.6	95.8	88.1
503	Meung	88.7	92.6	1.2	0.4	7.0	3.7	42.6	34.5	36.7	65.7	94.5	3.0	93.4	84.9
504	Phaoudom	86.5	94.7	1.0	0.5	5.0	4.5	43.1	32.7	23.2	69.8	85.7	2.5	73.8	79.3
505	Paktha	87.1	93.7	1.0	0.2	6.0	5.6	40.9	36.2	28.1	77.2	94.8	2.3	89.2	88.7
600	**Luangprabang**	**80.6**	**85.6**	**4.5**	**1.1**	**14.2**	**12.9**	**39.5**	**36.1**	**19.6**	**69.8**	**91.8**	**4.9**	**72.6**	**89.7**
601	Luangprabang	72.0	60.7	11.7	2.6	38.8	35.8	32.4	39.0	13.3	89.7	96.4	17.4	97.4	97.2
602	Xiengngeun	82.1	88.7	3.2	0.8	10.9	10.0	39.6	36.2	16.7	77.2	96.6	2.9	92.5	92.7

Code	Province/District	Employment Rate [18]	Self-employment [19]	Youth Unemployment Rate [20]	Unemployment Rate [21]	Proportion of Non-Agric. Wage Earner [22]	Proportion of Non-Agric. Own-Account Worker [22]	Dependency Rate [24]	Female in Wage Emp. Non Agric. [25]	Proportion of Married 17-year-old Girls	Improved Sanitation [27]	Improved Water Source [28]	Not Using Firewood [29]	Using Electricity [30]	Have a Phone [31]
603	Nan	85.7	90.7	1.2	0.3	9.1	6.3	36.4	34.2	13.8	83.9	94.9	3.2	82.3	92.0
604	Parkou	84.8	91.1	5.2	1.4	8.7	10.6	39.0	36.4	27.0	72.8	95.0	1.0	79.9	87.6
605	Nambak	83.3	92.8	3.0	0.6	7.1	6.9	38.7	30.5	20.5	74.0	90.0	1.7	80.9	92.2
606	Ngoi	82.1	93.3	4.0	0.9	6.6	7.2	41.5	32.5	23.0	52.9	88.6	2.6	67.5	86.1
607	Pakxeng	82.1	93.3	1.6	0.3	6.5	7.0	42.9	32.9	16.0	54.2	94.9	0.8	50.5	81.6
608	Phonxay	83.8	93.1	3.8	0.6	6.7	5.3	46.2	27.6	26.4	69.8	89.0	0.5	47.6	81.2
609	Chomphet	85.4	90.5	2.0	0.6	9.4	7.8	39.2	37.0	24.5	51.0	88.8	2.4	64.7	85.8
610	Viengkham	79.3	92.3	4.6	0.9	7.5	6.3	43.7	31.4	16.4	47.3	88.6	0.7	34.7	84.6
611	Phoukhoune	77.9	88.1	5.3	0.6	11.7	7.8	45.9	27.4	20.8	61.4	96.7	2.2	66.4	92.1
612	Phonthong	87.0	93.5	0.6	0.2	6.3	4.0	46.9	29.4	29.6	47.8	70.1	1.0	29.5	82.4
700	**Huaphanh**	**77.7**	**90.5**	**4.3**	**0.7**	**9.4**	**5.3**	**41.4**	**33.4**	**21.3**	**71.9**	**93.8**	**2.0**	**79.2**	**93.6**
701	Xamneua	75.5	81.7	7.8	1.0	18.2	11.0	40.0	35.9	21.4	69.3	95.5	5.9	82.0	96.0
702	Xiengkhor	78.3	92.2	4.4	0.6	7.6	2.1	38.7	33.4	27.3	78.7	96.5	0.9	87.2	95.3
703	Huim	76.7	86.5	11.4	1.2	13.2	6.0	38.8	32.0	10.8	69.3	99.7	1.3	95.9	91.4
704	Viengxay	76.7	90.2	4.5	0.6	9.6	5.3	37.3	35.8	12.8	84.6	96.7	1.2	84.4	95.3
705	Huameuang	82.3	94.6	2.5	0.3	5.3	4.1	43.4	29.4	23.0	74.4	99.7	0.6	66.4	91.0
706	Xamtay	76.2	93.0	3.2	0.8	6.9	6.3	44.1	29.1	22.9	65.1	94.4	2.0	77.5	95.2
707	Sopbao	78.6	93.5	2.7	0.3	6.5	3.0	39.7	34.4	20.8	79.1	88.4	1.3	90.6	94.4
708	Add	77.9	93.0	3.0	0.4	6.8	2.4	40.1	33.8	20.9	84.5	93.1	1.0	78.3	93.4
709	Kuane	79.6	94.1	1.8	0.4	5.8	2.3	47.7	24.9	27.4	47.5	92.6	0.4	64.1	87.7
710	Sone	77.8	93.0	2.3	0.8	6.9	2.5	44.8	29.4	21.1	62.9	72.2	0.6	70.6	90.3
800	**Xayaboury**	**87.1**	**88.1**	**1.5**	**0.4**	**11.6**	**6.5**	**34.0**	**33.1**	**24.5**	**89.7**	**86.7**	**10.7**	**90.1**	**93.0**
801	Xayabury	82.3	78.3	2.1	0.7	21.5	11.2	34.5	33.6	21.7	88.1	88.9	6.2	89.9	94.7

Code	Province/District	Employment Rate [18]	Self-employment [19]	Youth Unemployment Rate [20]	Unemployment Rate [21]	Proportion of Non-Agric. Wage Earner [22]	Proportion of Non-Agric. Own-Account Worker [22]	Dependency Rate [24]	Female in Wage Emp. Non Agric. [25]	Proportion of Married 17-year-old Girls	Improved Sanitation [27]	Improved Water Source [28]	Not Using Firewood [29]	Using Electricity [30]	Have a Phone [31]
802	Khop	85.8	92.8	2.8	0.7	7.1	5.3	34.0	25.2	40.4	91.8	97.1	3.2	96.7	95.8
803	Hongsa	85.6	79.9	2.7	0.9	19.6	8.6	34.5	31.4	25.6	83.6	96.2	4.1	83.4	92.8
804	Ngeun	89.8	89.7	0.8	0.2	10.3	10.2	36.0	32.1	29.8	94.4	96.3	2.7	83.3	93.2
805	Xienghone	89.2	91.1	1.4	0.5	8.8	3.4	33.5	35.1	30.9	92.8	96.1	1.6	84.1	90.2
806	Phiang	88.4	92.2	1.6	0.5	7.5	4.2	35.4	34.4	24.1	83.1	82.9	2.5	95.0	94.1
807	Parklai	87.6	90.7	0.9	0.3	9.1	6.7	32.6	31.9	20.8	96.4	76.8	15.9	93.4	93.9
808	Kenethao	89.7	93.1	0.5	0.1	6.4	3.7	31.4	33.9	23.8	97.6	76.1	18.9	98.6	96.0
809	Botene	89.0	86.0	2.1	0.3	13.7	7.8	31.4	35.3	23.4	96.7	88.0	71.2	98.1	98.2
810	Thongmyxay	87.2	86.0	1.5	0.3	13.7	3.9	30.1	33.5	18.1	97.4	88.4	8.4	98.8	97.7
811	Xaysathan	91.6	94.5	0.9	0.5	5.4	2.2	41.4	35.0	21.0	53.7	99.2	0.5	45.9	63.5
900	**Xienkhuang**	**78.6**	**86.0**	**6.3**	**1.1**	**13.8**	**9.6**	**41.3**	**34.5**	**18.2**	**81.5**	**91.0**	**3.5**	**86.0**	**96.0**
901	Pek	74.9	73.8	12.0	2.1	25.9	19.9	36.9	35.2	13.0	94.1	92.4	8.5	96.5	98.5
902	Kham	80.5	92.7	4.1	0.7	7.1	6.7	39.8	40.9	17.8	80.2	91.2	1.5	89.2	95.5
903	Nonghed	79.6	92.9	1.7	0.4	7.1	3.6	47.5	26.5	24.9	55.4	90.8	1.3	74.2	91.8
904	Khoune	79.3	90.5	7.2	0.9	9.3	7.0	42.8	32.6	24.1	80.5	95.8	2.1	86.3	96.8
905	Morkmay	81.6	88.2	1.4	0.6	11.7	4.2	50.5	25.7	21.9	84.7	96.3	0.5	42.0	94.1
906	Phoukoud	81.3	91.4	4.3	0.6	8.6	2.6	39.1	36.4	13.8	84.3	74.7	0.8	88.8	95.7
907	Phaxay	82.0	87.6	7.2	0.8	12.3	3.7	42.8	33.6	13.5	85.5	97.8	0.7	94.1	96.3
1000	**Vientiane Pro**	**79.3**	**84.2**	**6.8**	**1.3**	**15.5**	**11.5**	**36.6**	**33.7**	**17.0**	**91.9**	**90.0**	**9.5**	**98.1**	**96.7**
1001	Phonhong	76.3	73.5	9.8	1.9	26.1	21.4	35.0	33.2	15.1	98.1	97.2	16.9	98.8	98.8
1002	Thoulakhom	79.8	79.9	5.6	1.2	19.5	12.6	33.4	40.9	13.9	94.0	92.4	14.2	97.7	97.2
1003	Keooudom	74.7	66.0	9.5	1.8	33.6	25.2	32.2	37.2	4.2	98.7	94.0	13.0	98.2	98.5
1004	Kasy	85.0	93.4	3.2	0.4	6.3	3.9	40.7	27.8	17.7	72.9	88.6	1.7	98.3	92.5

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1005	Vangvieng	67.7	76.4	17.4	2.8	23.4	21.8	37.9	27.0	12.2	95.6	93.4	11.9	98.6	97.4
1006	Feuang	81.8	91.8	10.5	1.3	7.7	5.6	38.3	29.5	11.9	90.6	78.4	1.8	98.4	97.4
1007	Xanakharm	90.7	95.0	0.6	0.2	5.0	4.6	33.0	37.1	27.1	96.4	88.1	14.7	98.0	96.7
1008	Mad	72.9	92.2	4.9	0.6	7.6	3.6	37.5	28.9	21.5	86.7	90.4	1.5	97.1	94.6
1009	viengkham	71.8	62.5	15.8	2.4	37.2	14.8	30.9	40.1	6.0	98.9	98.4	18.0	99.1	98.5
1010	Hinherb	84.3	89.8	2.0	0.4	10.0	6.6	37.1	25.5	13.2	89.0	94.1	2.8	97.8	95.1
1013	Meun	85.0	95.4	2.0	0.7	4.2	4.4	43.4	30.1	34.8	88.0	77.7	2.5	97.0	95.9
1100	**Borikhamxay**	**82.0**	**88.4**	**5.0**	**1.0**	**11.3**	**10.2**	**38.6**	**33.5**	**21.1**	**91.9**	**89.7**	**22.6**	**92.9**	**94.6**
1101	Pakxane	78.4	73.8	4.9	1.0	25.9	16.2	32.4	35.3	9.1	98.3	96.6	60.7	98.1	97.9
1102	Thaphabath	85.8	88.0	3.7	0.6	11.3	8.5	34.1	36.3	15.6	99.1	94.8	43.1	99.2	98.3
1103	Pakkading	87.3	95.1	3.2	1.0	4.6	8.3	35.3	35.6	17.2	95.1	80.6	19.9	98.7	97.2
1104	Bolikhanh	82.1	89.6	4.2	1.0	10.1	7.7	41.7	31.6	22.5	88.5	86.1	8.1	95.7	95.4
1105	Khamkeuth	76.4	91.0	10.0	1.6	8.9	13.3	40.7	31.0	23.6	91.4	90.3	13.9	97.9	96.7
1106	Viengthong	85.7	91.8	2.0	0.5	7.9	5.5	44.4	27.3	31.5	80.1	91.5	2.3	79.7	90.1
1107	Xaychamphone	84.7	90.4	0.9	0.3	9.5	4.2	47.3	30.2	33.6	85.5	99.4	0.4	25.9	56.2
1200	**Khammuane**	**83.5**	**87.8**	**3.3**	**1.1**	**11.7**	**9.7**	**37.0**	**37.3**	**18.6**	**65.5**	**72.2**	**24.1**	**89.7**	**87.4**
1201	Thakhek	72.8	74.7	9.8	2.8	24.5	20.5	32.2	37.4	12.1	83.4	83.4	50.1	97.7	94.3
1202	Mahaxay	87.1	90.4	1.1	0.3	9.3	5.1	39.4	30.2	22.0	61.3	61.9	16.7	95.2	87.9
1203	Nongbok	89.5	91.3	1.0	0.3	8.0	4.7	31.2	46.0	15.8	92.6	86.6	22.1	98.0	95.9
1204	Hinboon	86.4	87.4	3.7	1.1	12.1	9.2	35.6	43.2	19.3	72.2	72.5	29.0	97.6	91.6
1205	Nhommalath	85.9	90.3	1.6	0.5	9.3	6.9	40.6	31.9	14.0	34.8	66.4	16.0	95.1	82.7
1206	Bualapha	88.6	94.6	0.5	0.2	5.2	5.2	45.6	30.3	26.3	37.5	51.3	2.9	61.1	67.1
1207	Nakai	85.8	94.5	1.6	0.5	5.5	11.5	42.0	31.6	33.2	48.4	69.1	11.7	70.6	65.3

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1208	Xebangfay	86.1	92.7	1.5	0.5	6.7	7.0	37.3	38.7	18.4	55.4	80.5	19.4	85.6	89.3
1209	Xaybuathong	86.8	93.9	1.9	0.3	6.0	5.6	43.5	30.9	26.0	47.6	44.7	7.5	82.7	84.8
1210	Khounkham	83.8	92.2	2.7	0.8	7.4	6.1	36.4	30.6	14.8	66.7	76.6	7.2	82.4	93.4
1300	**Savanakhet**	**81.6**	**87.3**	**3.4**	**1.2**	**12.2**	**8.3**	**36.4**	**41.7**	**17.5**	**57.7**	**73.3**	**41.4**	**80.4**	**87.5**
1301	KaysonePhomvihane	66.5	61.8	12.6	3.9	37.9	29.8	28.3	39.7	9.6	92.7	97.0	87.2	97.7	96.4
1302	Outhoomphone	84.3	84.3	2.9	0.9	15.1	12.4	33.8	41.5	14.0	64.7	78.4	61.9	94.7	92.0
1303	Atsaphangthong	84.2	89.6	1.8	0.7	10.1	5.1	36.8	40.0	13.1	57.2	65.4	39.0	88.7	87.8
1304	Phine	79.9	93.5	3.7	1.5	6.2	8.0	43.4	36.6	26.3	34.7	66.8	30.5	57.1	79.4
1305	Sepone	77.6	92.8	9.2	2.1	6.8	7.1	47.4	33.2	32.9	25.2	63.6	11.2	59.2	62.4
1306	Nong	82.9	94.0	3.9	1.0	5.7	3.6	47.8	29.0	40.0	8.7	64.5	3.9	35.9	61.4
1307	Thapangthong	85.9	94.9	3.1	0.8	4.7	3.8	42.4	43.3	32.9	22.6	52.2	24.8	50.0	85.2
1308	Songkhone	87.7	94.5	0.9	0.4	5.3	5.5	32.6	44.7	19.8	77.2	81.5	80.7	91.5	94.5
1309	Champhone	83.3	86.6	1.0	0.3	13.2	4.6	33.1	50.4	9.9	65.1	74.7	26.6	94.2	92.5
1310	Xonbuly	86.4	94.5	1.0	0.5	5.3	3.4	40.0	48.3	14.2	29.7	42.7	5.0	63.3	83.9
1311	Xaybuly	88.8	85.3	0.9	0.5	11.2	4.4	33.8	45.3	18.2	75.7	84.1	18.4	97.0	92.3
1312	Vilabuly	81.0	87.7	4.1	1.6	12.2	4.4	41.9	29.7	23.1	55.9	64.9	13.4	75.0	86.0
1313	Atsaphone	80.2	94.4	4.0	1.3	5.4	2.8	39.9	38.2	16.2	36.0	58.4	7.5	55.8	85.8
1314	Xayphoothong	82.1	94.3	4.0	0.9	5.6	2.5	29.8	46.2	16.0	95.3	93.5	91.1	98.8	96.5
1315	Phalanxay	89.3	91.3	1.4	0.6	8.4	2.6	40.3	40.9	17.4	27.9	63.6	16.1	72.5	79.1
1400	**Saravane**	**88.4**	**90.4**	**1.0**	**0.4**	**9.2**	**4.5**	**40.4**	**43.7**	**21.0**	**34.9**	**70.2**	**31.2**	**76.7**	**85.4**
1401	Saravane	84.6	89.0	2.1	0.6	10.8	5.4	39.1	37.5	14.8	29.4	73.8	31.5	77.3	87.2
1402	Ta oi	88.1	95.1	1.2	0.3	4.7	2.8	49.2	31.7	37.1	12.3	62.9	4.5	34.7	73.5
1403	Toomlarn	90.4	95.9	0.6	0.3	3.9	2.6	47.1	26.6	29.4	3.6	66.2	3.7	42.7	84.1

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1404	Lakhonepheng	91.6	91.7	0.7	0.4	7.9	5.2	35.4	46.9	21.2	57.3	57.9	77.9	92.2	89.3
1405	Vapy	88.2	90.9	0.9	0.4	8.9	4.2	37.7	48.0	15.9	45.2	66.0	37.2	92.8	89.6
1406	Khongxedone	89.9	83.4	0.4	0.2	16.3	4.8	36.3	53.4	22.8	61.9	72.8	48.3	95.9	92.0
1407	Lao ngarm	90.5	94.5	0.5	0.3	4.7	4.6	41.5	39.0	22.3	24.0	78.7	10.5	81.0	85.0
1408	Samuoi	82.7	88.8	2.2	0.5	11.0	2.0	51.1	26.0	22.0	20.1	67.6	4.1	37.6	54.3
1500	**Sekong**	**78.9**	**84.2**	**6.3**	**1.9**	**15.5**	**6.2**	**45.5**	**30.6**	**22.1**	**56.4**	**82.5**	**17.2**	**76.7**	**83.8**
1501	Lamarm	71.9	71.7	13.0	2.6	28.1	10.7	41.4	33.0	19.1	66.0	87.4	38.5	88.2	90.3
1502	Kaleum	86.8	89.7	1.0	0.2	10.0	2.9	51.5	19.4	27.9	32.7	78.4	4.5	37.8	72.7
1503	Dakcheung	83.2	86.9	3.7	0.9	12.9	2.6	50.7	27.0	29.0	30.7	70.0	2.6	52.0	75.6
1504	Thateng	80.3	91.0	4.7	2.4	8.5	5.6	43.8	32.0	19.1	72.6	86.9	12.1	96.7	87.2
1600	**Champasack**	**85.7**	**84.8**	**2.1**	**0.9**	**14.8**	**8.6**	**36.5**	**40.5**	**15.0**	**65.8**	**76.0**	**65.7**	**93.7**	**93.9**
1601	Pakse	67.1	53.4	12.8	3.9	46.3	42.2	30.4	34.9	7.5	94.6	97.0	90.9	97.3	98.1
1602	Sanasomboon	88.2	93.0	1.6	0.6	6.7	2.8	33.6	39.2	13.4	73.9	78.4	46.5	96.1	92.8
1603	Bachiangchaleunsook	83.0	67.1	1.9	0.7	32.3	14.1	37.4	39.9	13.5	56.2	81.1	33.6	95.7	92.0
1604	Paksxong	87.9	94.2	0.6	0.2	5.4	2.7	40.5	33.2	12.9	40.9	73.1	11.4	83.0	89.6
1605	Pathoomphone	87.3	91.1	1.8	0.6	8.7	4.8	37.5	39.6	18.5	66.2	73.0	73.0	93.7	93.9
1606	Phonthong	89.9	89.5	1.6	0.6	10.2	5.1	33.2	42.2	16.2	75.4	87.6	89.7	96.0	95.5
1607	Champasack	89.4	80.8	1.0	0.4	18.7	4.9	34.7	50.6	13.1	68.3	91.3	83.1	95.9	96.2
1608	Sukhuma	89.5	88.4	0.9	0.5	11.1	3.9	38.9	43.2	20.0	53.1	82.9	76.5	92.7	92.4
1609	Moonlapamok	89.3	84.3	0.7	0.5	15.1	6.3	40.5	45.5	22.9	57.9	63.3	81.8	92.4	93.1
1610	Khong	88.0	93.6	1.2	0.4	6.3	5.1	39.9	44.6	16.1	63.6	38.4	72.0	94.7	94.6
1700	**Attapeu**	**83.5**	**87.5**	**3.6**	**1.0**	**12.2**	**9.1**	**40.6**	**32.2**	**22.6**	**50.3**	**73.8**	**17.5**	**78.8**	**85.1**
1701	Xaysetha	86.2	91.9	2.1	0.5	7.6	8.1	36.5	32.2	23.6	53.2	76.8	19.0	82.7	88.0

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1702	Samakkhixay	76.5	72.9	9.5	2.0	26.9	13.2	36.9	33.6	13.2	62.1	88.1	34.8	94.3	90.5
1703	Sanamxay	85.7	93.6	2.4	0.7	6.3	5.6	43.5	32.5	25.3	45.1	61.5	10.4	68.0	83.5
1704	Sanxay	85.4	91.3	1.8	1.0	8.0	8.5	48.1	28.1	31.3	46.4	65.9	3.2	60.9	78.4
1705	Phouvong	87.7	91.9	0.4	0.4	8.0	10.5	40.6	25.9	25.2	32.7	72.5	9.3	83.9	79.2
1800	**Xaysomboune**	**78.4**	**86.0**	**6.3**	**1.3**	**13.8**	**7.4**	**44.9**	**25.1**	**26.7**	**83.9**	**91.0**	**2.9**	**82.8**	**95.7**
1801	Anouvong	76.4	75.8	4.0	1.1	24.1	10.6	46.4	24.1	25.2	90.2	97.8	4.6	96.5	97.1
1802	Thathom	82.0	91.0	6.1	1.2	8.9	4.8	40.3	34.8	21.0	81.9	93.7	1.6	61.6	94.7
1803	Longcheng	85.7	86.7	3.7	0.5	13.2	4.3	45.1	27.3	37.5	85.7	91.0	3.4	82.9	91.0
1804	Home	76.9	89.7	1.7	0.9	10.2	4.9	49.6	12.2	39.0	74.0	96.5	1.0	70.7	95.1
1805	Longsane	75.5	88.8	11.2	1.9	11.0	9.3	45.2	23.8	24.9	83.8	79.9	3.0	93.5	96.9

Source: Authors' calculations based on 2015 Lao PDR Census

Note: The provinces are shown in bold, while the associated districts are listed below their respective province.

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