State parenting:

investigating a shift of welfare responsibilities from families to state in East Asia

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1. Summary

In East Asia; what was the relation between the change in the social value of intergenerational solidarity and the attitude towards the role of the state in welfare distribution during the time period between 1994 and 2006?

From the theory on East Asian welfare states we learn that welfare distribution is for a large part based on the family in that part of the world. It seems, however, from the literature that the family ties are weakening as a result of an aging population and changing society. Aging and changing intergenerational solidarity could not only influence the way people look at others in society, but because of the great reliance of family in East Asian welfare distribution, also alter their expectations of the role of the state in welfare distribution. This leads to the research question as stated earlier. Using indicators from the World Values Survey this study investigates the change in intergenerational solidarity and attitude towards the welfare state in East Asia. Countries that will serve as exemplary states for East Asia are Taiwan, Japan and South Korea. The data shows mixed results that do not provide support for a clear relation between intergenerational solidarity and the attitude towards the role of the welfare state in welfare distribution in East Asia.

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2. Introduction

In a European aging society we wonder more and more about how an ever smaller working and productive part of the population will be able to keep providing for a increasingly older society. For an answer to this we could maybe look at other parts of the world where welfare distribution is not as much organized by the state, but family takes a much larger role, specifically East Asia. As in these states aging is as much, or maybe even more, of a problem than in Europe we would like to know whether such a change in society changes peoples perception of the role of the state in welfare distribution. Would in societies where the reliance on the state for welfare distribution is much smaller people look more to the state to interfere?

Along with aging decreasing intergenerational solidarity could affect the expectation people have of the state. The two concepts cannot easily be separated in this regard. The expectation of a decreasing intergenerational solidarity is based on statements in the literature that the East Asian society is individualizing and converging towards more western values (Aspalter, 2006; Croissant, 2004; Holliday, 2000). As the part of society that needs to be taken care of grows, do the perceptions of the responsibilities of the state in welfare distribution grow? One would expect a shift from family to other institutions as social values change and societies age. The literature seems to partially agree and speak of a "*growing dependency on formal systems*" (Croissant, 2004, p. 520) but also that there is "c*lear preference [...] to the family and the market in welfare provision*" (Aspalter, 2006, p. 298)

This leads to the assumption that as intergenerational solidarity in East Asia decreases, support for a bigger role for the state in welfare distribution increases. This claim will be the core of investigation in this study.

3. Theory/concepts

Two concepts that need to be elaborated on are “attitude towards the role of the state” and intergenerational solidarity. Both of these concepts are rather broad concepts and are too elaborate to be studied entirely in a bachelor thesis. Knowing this I will focus on certain aspects of both variables, as we will see in the research design, where I set out what indicators I will use.

3.1 Welfare State

The first concept that needs further explanation is the term welfare state.

Before going into any specifics it is necessary we broadly define the concept of the welfare state. One cannot define the welfare state without understanding the concept of social policy. Kleinman (2002) describes that multiple choices can be made about how broad social policy is defined. We choose to go along with his broadest perception, mostly because we want to elaborate on the concept later. We assume social policy consists of “*government interventions over resources that are designed to affect the individual behaviour or command over resources or to influence the economic system in order to shape society in some way*” (Kleinman, 2002, p. 1). This definition is very broad and somewhat vague, as a working definition we could use that social policy are all policies that are implemented with the goal of influencing the quality of life of the citizens (or a specific group of citizens) often mitigating effects of the free market. From this follows a definition of the welfare state Kleinman (2002, p. 2) borrowed from Esping-Andersen: “*state responsibility for securing some basic modicum of welfare for its citizens*”. Even under this definition the welfare state is not a unidimensional concept, but can rather be subdivided into seven dimensions. These dimensions are Goals, Welfare Mix, Range, Degree, Redistribution Design, Implementation Process and Outcomes.

The Goals dimension refers to the general goals of the welfare state system. These include “*social security and protection against the rigidity of the market and [...] to impose some kind of social order based on an idea of social justice*” (Roosma, 2011, p. 5).

The Range and the Degree dimension are the dimensions that have endured the most research so far. The Range is the width or scope of policies where the government takes responsibility, whereas the Degree dimension is all about how intensely the government interferes in that specific area. The former includes three pillars; social benefits, social services and active labor market policies. The latter is usually rather easily measured in the amount of spending in the investigated area. Some social policies set the Asian system apart from the more Western system; these include “*other types of policy, including agricultural protection, public housing, educational expenditure and regional-targeted programs also play important role in social protection. Therefore, literature based on the experience of western countries may seriously underestimate the degree of social protection in East Asian countries*” (Cheng, 2010, p. 6).

The redistribution dimension “*relates to Rothstein’s legitimacy condition of just distribution of burdens*” (Roosma, 2011, p. 10).

The fifth dimension is the implementation of the redistribution scheme. There are two categories in the implementation dimension; efficiency and effectiveness. The first, efficiency, is about whether resources are efficiently redistributed without much spilling of

resources. The second, effectiveness, states the ratio of whether people who need support actually receive it and no people falsely receive it.

The sixth dimension is outcomes and, even though not identified by others, plays a significant part in this framework of dimensions because "*people also have attitudes about the performance of the welfare state and that this performance also contributes to the legitimacy of the welfare state*" (Roosma, 2011, p. 11).

The last dimension is the welfare mix dimension. Not mentioned earlier on in the literature (Oorschot; Meuleman, 2011), this dimension includes other institutions as providers of redistributive measures. Institutions like market, civil society or, very much relating to our subject, the family. According to Roosma (2011, p. 12) this dimension relates to "*broader political philosophical questions like; what is the responsibility of the individual? [...]*". The changes in the attitude towards this question and how it balances with state responsibility is exactly what we want to observe as an effect of changes in social values.

3.2 Worlds of Welfare Capitalism

The worlds of Welfare capitalism at first do not seem very relevant to our research and research question. The welfare state model is not a concept used in the study, but it will help us understand why the literature leads us to have a certain expected outcome. So although not directly linked to the research these models could greatly help us understand the material of the welfare state.

Esping-Andersen identified three worlds of welfare capitalism. Three worlds (models) that are very much focused on describing western ideal-typical welfare models. Later on, authors like Ian Holliday and Christian Aspalter have tried to build on the basis of this framework another model, a model that would be ideal-typical for East-Asian welfare states.

A general conclusion seems to be that there is, in fact, an East Asian welfare model and that it is different from the other models in a number of ways. The most striking difference can be found in that "*The key to the performance of [...] countries in the region in terms of income equality lies outside the realm of state welfare.*" (Croissant, 2004, p. 516). This stands in stark contrast to the other worlds of welfare capitalism where the state plays a large role in income redistribution. We could consider this a difference in the welfare mix dimension as well as in the range dimension of the welfare state. Another indication this is true can be found in Aspalter (2006, p. 298) where he states there is "c*lear preference [...] to the family and the market in welfare provision*". This conclusion, though, does certainly not seem to be set in stone for the future of East Asian welfare states, at least according to Croissant (2004). He states that there is a trend of weakening family bonds, due to aging and other social developments, that is "*leading to a growing dependency on formal systems. [..] an increasing role for the state is likely.*" This claim by Croissant is the undertone for our expected outcome of the study.

In a broader sense this statement is not a very unique one and seems to relate to theory of Esping-Andersen (1999) who writes about a welfare triad; a triple of welfare pillars that together form the basis for welfare distribution. These pillars are the Market, Family and State. A shift in focus away from one would automatically mean another would come into play more.

3.3 Intergenerational Solidarity

Intergenerational solidarity seems like a rather straightforward concept and can be defined as the perceived and actual closeness and solidarity between different generations, in this research specifically different generations within a single family. Investigating the concept further will learn that it is a multi-faceted concept, that needs more explanation than a single-line definition.

In measurement it calls forth some questions of operationalization. First off there does not seem to be agreement on the term to be used. Where intergenerational solidarity is a widely used concept some authors propose a different term. "*We argue [..] that the study of parent-child relations in later life must move beyond this "love-hate relationship." [...] are not two sides of an academic argument that will ultimately be resolved in favor of one viewpoint*" (Leuscher; Pillemer, 1998, p. 414). They proceed to suggest the concept intergenerational ambivalence. Because I want to use an understandable and accessible concept to describe a parent-child relation I will continue to use the term of intergenerational solidarity. In this relation Silverstein and Bengtson (1997, p. 429) identify a five point scale of "tightness" or solidarity "*tight-knit, sociable, intimate but distant, obligatory, and detached.*"

As with attitudes towards the welfare state, intergenerational solidarity can also be conceived in a number of dimensions. Silverstein and Bengtson (1997) identify six;

- Structure;
  How are the family-members geographically located (proximity) that de- or increases interaction.
- Association;
  How often do family members meet and undertake activities together?
- Affect;
  The emotional side of solidarity, do the family-members feel "close" and intimate?
- Consensus;
  How much do family members share social values, opinions and lifestyles?
- Function;
  Is there material dependence on one another in the family? This can be either instrumental or financial.
- Norms;
  How strong do family members feel that they have an obligation towards one another?

Contrary to their presentation here, these dimensions cannot be seen as isolated entities. We can imagine how they can affect and influence one another. E.g. a more affective relationship might lead to a more functional relationship. We will see later that finding indicators to match these dimensions can be quite hard.

With a general convergence towards more Western values (Aspalter, 2006; Croissant, 2004; Holliday, 2000) we expect family bonds to weaken and intergenerational solidarity to decrease. An aging population (as is the case in all three of the countries in this study (Asian Development Bank, 2011)) is another motivator of decreasing intergenerational solidarity (Croissant, 2004). This forms the main basis for this study. Decreasing intergenerational solidarity could lead to a smaller welfare distribution responsibilities for the family and "*a growing dependency on formal systems."* (Croissant, 2004, p. 520). This leads to the assumption that as intergenerational solidarity in East Asia decreases, support for a bigger

role for the state in welfare distribution increases. This claim will be the core of investigation in this study.

4. Methods and Data

4.1 Research Questions

The question I want to answer in this research describes a connection between two variables. I look at whether there is a relation between two variables, not if one is an explanation for the other.

Main Question

In East Asia; what was the relation between the change in the social value of intergenerational solidarity and the attitude towards the role of the state in welfare distribution during the time period between 1994 and 2006?

Sub Questions

1. How did the social value of intergenerational solidarity in East Asia change between 1994 and 2006?
2. How did the attitude towards the role of the state in welfare distribution change between 1994 and 2006?
3. Is there a relation between the answers to the first two questions? And if so, how strong is this relation?

4.2 Hypothesis

In a study like this, it is important to formulate at least one hypothesis that will help us to draw conclusions the end of the project. The hypothesis should say something about what result we expect to see. The theory behind this expectation can be found in the theory/concepts chapter. What our conditions will be for accepting or rejecting the hypothesis can be found in the data analysis chapter.

H_0:	*There is no relation between intergenerational solidarity and attitude towards the role of the state in East Asia.*
H_A:	*As intergenerational solidarity in East Asia decreases, support for a bigger role for the state in welfare distribution increases.*

4.3 Research design

Important to realize before we decide on how we answer the research-question is what it actually entails. We are looking for a change over time of two variables and then what the relation between the two changes is. Using data from a third source (World Values Survey) we are limited in our choice of a research design. We do know however that we need at least two testing instances for both concepts if we want to observe change. The research design best suited in this situation is the longitudinal design. In the way I will apply it, it will have just two test-instances. With a longitudinal design one could incorporate more test moments to increase the validity of the research, but due to the availability of data this is not an option for me.

Taking the previous into account the setup of the study will look like the diagram below. The fact that there are four dates instead of the expected two is something we will go into in the chapter about case selection.

Test 1	Time	Test 2
1994 & 1995		*2005 & 2006*
$X_{(1)}$	dX ==>	$X_{(2)}$
$Y_{(1)}$	dY ==>	$Y_{(2)}$

4.4 Validity

In the ideal situation we would have more testing moments, but due to the nature of the surveys of which we obtain the data this is virtually impossible. This of course poses a serious threat to the internal validity of the study. In an attempt to increase the validity of the study we will try to use multiple indicators for a single concept where this is possible.

As for the external validity of the study we have to bear in mind that these concepts cannot be applied in the same way globally, hence the search for ideal-typical worlds of welfare capitalism. Even within the worlds of welfare capitalism some differences in attitudes and mechanisms can be observed. For instance in the Productivist world of welfare capitalism we can distinguish a number of separate clusters (Holliday, 2000). This means that extrapolating the results, or making predictions for other countries on the basis of these results could prove problematic. With our case selection we do however take into account that the countries we study should be a similar type of welfare state in order to improve both internal and external validity.

As a last threat to internal validity we could state that both the pre-test and the post-test are not conducted at exactly the same time for all countries. This has mainly to do with the magnitude of the survey project. It poses the risk that between pre-tests a significant event could have influenced our variables, making us measure a smaller effect (partially), or between post-tests, allowing us to see a greater effect. Because the surveys were conducted within one wave I feel safe to assume this threat is only minor.

4.5 Case selection and sampling

The case selection, as mentioned earlier, is not just derived from countries topographically located in the area we want to study. It also takes into account whether the countries are considered belonging to the East Asian welfare model (Aspalter, 2006). This is important because the welfare policies in place could have a great influence on the attitude towards the role of the state.

Another very important factor is the availability of data. The countries selected have in common questions that were asked during multiple waves of surveys. This has a positive effect on the validity of the study, as we do not have to reinterpret answers and questions.

Country	Test 1	Test 2
Taiwan	1994	2006
Japan	1995	2005
South Korea	1995	2005

The data we see here looks to be taken from four different waves of surveys, but as explained in the chapter on validity, the magnitude of the survey leads it to stretch over a long period of time. Stating the surveys were all from one year would distort the picture, but being in one wave I will treat them as being from the same “moment”.

4.6 Data collection

The data for this study will all be retrieved from a third party. Gathering the data for this study alone is a very lengthy process process of which the costs outweigh the benefits by far. Looking at our possible data sources and at the concepts of the welfare state and intergenerational solidarity we can at first glance see that the dimensions of the latter are likely to be easier to measure than the first.

World Values Survey

The main data for this study will be data from the World Values Survey. This project gathers survey data on all kinds of social attitudes around the world. There is a problem when looking for data from East Asia. There is not great consistency in what questions are asked. In order to be able to compare data, we need the same questions to be asked at different times (at least twice, as indicated in the research design). For this purpose I selected three questions we will use to measure the change in our concepts.

#	**Attitude towards the welfare state**	**Dimension***
1	*People should take more responsibility to provide for themselves vs The government should take more responsibility to ensure that everyone is provided for.* (ten point scale)	Range (possibly Degree)
	Intergenerational solidarity	**Dimension***
2a	*One of my main goals in life has been to make my parents proud.* (four point scale)	Norms
2b	*How important is family in your life?* (four point scale)	All

*states how the question corresponds to one of the dimensions of the concept as listed in the theory chapter.

These particular questions were chosen because they were most suitable from the questions available. They were however not the only questions that were considered for this study. Per variable three questions were shortlisted to be selected. Not all of these questions however measured exactly what we wanted to measure. So after dismissing two questions[1] from the welfare state-variable we have one indicator left to work with. The two were dismissed both in terms of relevance to the variable as well as being too dependent on the particular country. For the intergenerational solidarity variable we initially also selected three indicator-questions and brought it down to two. The third question[2] was deselected mostly because at second glance it revolved more around family-oriented policy than around actual perceptions within and of the family. On the remaining questions we have a sample size of approximately 1200. This sample size along with the aim of the World Values Survey to apply random samples where possible (WVS Brochure, 2008) allows us to be confident that the sample is representative for the entire population.

Question 1 is in one direction exactly the question we want to ask, namely, how great do you feel government responsibility is in income distribution? A disadvantage, from the research perspective, is the word more, which makes the question reliant on current policy.

1 The questions were: “Incomes should be made more equal vs We need larger income differences as incentives” and “For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all? The government.”

2 The question was: “Please tell me for each one, if it were to happen, whether you think it would be a good thing, a bad thing, or don't you mind? More emphasis on family life”

Both questions 2a and 2b do not exactly measure the concept of intergenerational solidarity. The biggest difference is that both questions measure perceptions and opinions and that most part of the concept is about actions, not so much intentions. Together, however, they should provide an adequate indicator for what we want to measure.

A point to consider in this matter is that what in the western world is considered a family-member is probably subject to a wider definition in East Asia due to cultural differences. This might also be a danger to our research, we will however assume we have mostly measured first-degree family with our indicators.

Answer categories

In analysis it is not just interesting to know how many categories there were for the subjects to answer in, but also what these categories are. This will help us to in the end assess the validity of our study. Question 1, about state responsibility, is variable number E37 in the WVS. Its answers are closer to an interval scale than the answers to the other questions. The answers range from 1 to 10 with only labels assigned to value 1 and 10. The first being “People should take more responsibility” and the latter being “The government should take more responsibility”. By leaving the values in between blank it is more likely that people answering the question will interpret the interval between the values as equal and choosing their answer as such.

For question 2a and 2b the answer categories are the same and will therefore be listed only once. These categories range from 1 to 4 and cannot just be labeled as interval values. This is mainly because the categories are each assigned a label that could be considered subjective. Because the label is subjective we cannot assume the interval between the values is equal. The values are listed below:

1. Agree strongly / Very Important
2. Agree / Rather important
3. Disagree / Not very important
4. Strongly disagree / Not at all important

4.7 Data analysis

When we look at the data there is one thing that requires our attention and needs solving before we go any further. The answer categories for our indicator-questions are of an ordinal measurement level. Ideally we would want to calculate a correlation to show the relation between the change in the variables. This, strictly speaking, would not be allowed. It does, however, provide us a great advantage in analyzing the data if we would calculate the correlation.

So with the realization that this is formally not the best way to do it, I will calculate the correlation between the two variables. Mind that this is the correlation between variables and not between indicators so first we would have to calculate the average of the indicators we have under intergenerational solidarity. In calculating the averages there are no issues with standardizing as the indicator questions we need to merge have the same number of answer categories. As with calculating a correlation, standardizing is not allowed for ordinal data and would put a larger validity strain on my research than there already is.

Although not standardizing we do need to assign values to the answer categories. With question 1 this is already done for us on a scale from one to ten. In the two waves however the question is answered exactly inversely, meaning that value 10 is first assigned to greater government responsibility and later to greater personal responsibility. To be able to work with the values I had to reverse one of the two. To make it a more intuitively readable value I decided that 10 would be the most government responsibility, making it more in line with the question we are asking. For question 2a and 2b I assigned values 1 to 4 corresponding with the number of answer categories. Here I made sure that a higher value would represent "more intergenerational solidarity". This means that value 4 is attached to the answer indicating the most closeness of relationship and 1 to the least.

Systematically, the data I will be analyzing will have the following form:

Country	Attitude towards welfare state (variable 1)	Intergenerational solidarity (variable 2)
Taiwan	Δ(mean of Q1)	Δ(mean of Q2a) + Δ(mean of Q2b)
Japan	Δ(mean of Q1)	Δ(mean of Q2a) + Δ(mean of Q2b)
South Korea	Δ(mean of Q1)	Δ(mean of Q2a) + Δ(mean of Q2b)

With this information, but without the actual data it is hard to estimate what the magnitude of the values of the deltas will be. A little help can be derived from the scale of the preceding variables. As described earlier variable one is measured on a scale from one to ten whereas variable 2 (a composite of two 4-scale indicators) is measured on a scale from one to eight. This gives us a slight idea of the magnitude we should be looking for. With either SPSS or Microsoft Excel I can calculate the correlation between the two variables. To draw conclusions on the basis of this data I will need an alpha-level that can be the cut-off point. Here I will use not one, but two levels. First testing my hypothesis to an alpha-level of 0.05, should this provide positive then that will be the conclusion of the research. If we fail to reject the null hypothesis with our alpha-level of 0.05 we will attempt the process with a higher alpha-level of 0.10. The reason for this second test is simple. If the first does not allow us to draw conclusions it can still be nice to see if our data in some way supports our claims under slightly less scrutinous investigation. Accepting a second, higher, alpha-level will not improve

the validity of the study or help draw conclusions, but it might help the understanding of the complex way in which the variables are, or are not, related.

5. Changing intergenerational solidarity

In order to answer our research question we will first have to answer our sub-questions. This means the first thing we should look at is the change in the social value of intergenerational solidarity. From the literature we get the idea that with more easily measured concepts like aging increasing, intergenerational solidarity decreases. Hints at a more individualized society seem to agree with this statement as well as claims that the familial oriented welfare systems in East Asia are not sustainable (Croissant, 2004).

Looking at our indicator-questions we can see some changes over time in the answers people give to the questions. These changes however are not exactly the ones we expect on this variable. Looking at our H_a-hypothesis we expect a decrease in intergenerational solidarity, this finds its basis in our theoretical framework.

As these changes are relatively small numbers it is hard to decide whether they are actually a change or just a different or deviant sample. The question one should be asking is, is the change in this variable statistically significant? To answer this question we need to formulate two hypotheses on the basis of sub-question 1. Because of the way this question is formulated we are looking for a two-sided alternative hypothesis. The reason for this is that if the change in the variable is in an unexpected direction we also want to know about it, and not assume that there is no significant change. It will be easiest and most valid to determine separately for both indicators whether the change is significant. Considering the indicators are so similar we can use quite similar hypotheses as well. In our data analysis chapter I already stated that I want to use the averages for each country as separate data-points. This means that we have to evaluate separately for each country whether the change is significant. This way we come to the following hypotheses:

H_0:	*There is no change in the average value for the entire population on question 2(a or b) over the time period of 1994 to 2006.*
H_A:	*There is change in the average value for the entire population on question 2(a or b) over the time period of 1994 to 2006.*

To be able to test the null-hypothesis we will be doing a independent two-sample t-test. The SPSS-output for the two-sample independent t-tests can be found in appendix II.

Question 2a

	First Wave	Second Wave	Change	Significance
Japan	2.307	2.723	0.416	0.000
South Korea	2.688	2.93	0.242	0.000
Taiwan	2.732	3.025	0.293	0.000

The question 2a (One of my main goals in life has been to make my parents proud) is a question very much relying on the norms-dimension of the concept of intergenerational solidarity. To be clear, as an indicator for intergenerational solidarity we expect, from our framework, that this indicator will decrease over time. In the first wave (1994 - 1996) we measure the lowest value of the set with an average of 2.31 (on a scale with minimum 1 and maximum 4). This value is rather low compared to the other values which are 2.73 and 2.69 for Taiwan and South Korea respectively. The difference between the first and second wave

is most clear in Japan, where the indicator increases with 0.42, the largest change on this indicator of all three countries. This indicator changes in South Korea and Taiwan with 0.24 and 0.29 points respectively.

When investigating the statistical significance for question 2a we see a very similar picture for each of the countries. When executing the t-test we find first of all, that we have to work with the scores provided when we assume that the variances are not equal. We know this by the score of the Levene's test; a score smaller than 0.05 shows us that the variances are significantly different. For the significance we find 0.000, this is smaller than 0.05, so the variances are significantly different. This goes for all three countries on this question.

To see if the change on the indicator is significant we look at the two-tailed significance. We want to know the two-tailed significance because we want to know about change in any direction, not just the direction of our hypothesis. Here too we find the same result for the change in each of the countries. We find a 0.000 result on each account. Earlier we established that the first alpha-level we would be testing by would be 0.05, so we find a value that is within our threshold.

This allows us to reject the null-hypothesis we stated about this indicator and assume that indeed the change on this indicator is a significant one. With the assumption that the World Values Survey-sample is a representative sample for the population we can conclude that this change is indicative for a change in the population.

Question 2b

	First Wave	Second Wave	Change	Significance
Japan	3.899	3.916	0.017	0.18
South Korea	3.9	3.921	0.021	0.098
Taiwan	3.763	3.907	0.144	0.000

Question 2b measures how important people say family is in their life. The differences we see on this variable between the two waves of the survey are very small compared to the differences we see on the other indicator. It makes sense to compare them at first to get a first picture of what the results look like since they are both measured on the same scale. The values for this question are very tight together for all three countries on both waves of the survey. For the first wave all the averages are between 3.76 and 3.90, so a rather small spread. In the second wave the spread is even smaller with averages between 3.91 and 3.92. Because these averages are very close together (both within each wave but also among them) the differences between the averages, or changes in the indicators, are rather small as well. The largest change is in Taiwan with 0.14 points the others have both changed only 0.02 points.

To see if this change is statistically significant we again look at the results for a two-sample independent t-test for each of the countries. First we will consider Japan. We find a Levene's significance of 0.01 so we are safe to conclude that the variances of the two test instances are significantly different. The two-tailed significance however is 0.18, generously exceeding our alpha-level of 0.05. Even when applying our less scrutinous alpha-level of 0.10 we cannot reject the null-hypothesis. This in a large part can be written off to the very small changes we find in the first place.

For South Korea yet again we can not assume equal variances with Levene's significance score of 0.001. The score for the two-tailed significance comes at 0.098. This score is too

high to pass our initial alpha-level of 0.05, but it fits neatly in our less scrutinous alpha-level of 0.10. This result is not the most desirable, but it provides us with information nonetheless. So with this higher alpha-level we can reject our null-hypothesis. This rather high score on the t-test again seems to be in large part due to the very small change in the averages.

Last we look at the significance of the change in Taiwan. SPSS finds for the Levene's significance for the variances 0.000. Obviously this is well within the level of 0.05. Not assuming equal variances we find 0.000 for the two-tailed significance. As a first on this question this value is easily within our alpha-level of 0.05. This means we can reject the null hypothesis and assume that the change in the indicator for Taiwan is statistically significant.

Sub-conclusion

How did the social value of intergenerational solidarity in East Asia change between 1994 and 2006? From the literature we already had an expectation towards what would happen with the social value of intergenerational solidarity over this time period. This expectation was that it would decline or decrease. The data however suggests that it changes in exactly the opposite direction. We found two changes that were not statistically significant, but would not have made an impact on our results either. As for the other results, not only did we find the change significant, but they also increased against our expectation.

In conclusion we find that the social value of intergenerational solidarity increased over the time period between 1994 and 2006. How this can be different from our expectation is something about which I will go into further detail in the discussion chapter.

6. Changing Government responsibility

The second sub-question that needs to be answered before we can move on to our main research question is: How did the attitude towards the role of the state in welfare distribution change between 1994 and 2006? Different from our variable on intergenerational solidarity this variable only has one indicator. This is mainly because I feel confident that this indicator can actually measure what we want to know, so adding a second would not increase the validity of the study dramatically.

The hypotheses formulated as a result of the research questions would lead us to expect that the perceived responsibility of the state would increase. This means that on the indicator-question the average values are suspected to increase between the first wave and the second. For the second wave the values attached to the answers are reversed in contrast to the first wave. This is because the question in both waves is exactly the same, with the only exception for the answers which are exactly reversed (most government responsibility having value one instead of ten).

	First Wave	Second Wave	Change	Significance
Japan	6.935	6.978	0.043	0.80
South Korea	7.8	7.472	-0.328	0.000
Taiwan	5.497	5.98	0.483	0.001

In the first wave we see that mostly in South Korea people think that the government should take more responsibility in welfare distribution, the average answer here is 7.8 (on a scale of one to ten). The averages for the other countries are significantly lower during the first wave, nonetheless the values are still biased towards government responsibility vs. individual responsibility. The average answers for Taiwan and Japan are respectively 5.50 and 6.94.

When we look at the second wave we can see something interesting. Deviant from our expectation we can see a difference not only in magnitude of change in this indicator (so also in the variable) between the countries, but also a difference in direction of change. South Korea, which had a strikingly high value in wave one, we see a change towards 7.47, his however is still only a decline of 0.033. Furthermore this is the only country to change in this direction, the others increase during the time between the waves. For Japan the change on this indicator is minimal at only 0.04 points, while in Taiwan it is higher with an increase of 0.483 points.

We have observed changes in the indicator of this variable. The next question is and should be: “Are these changes significant?”. To test whether the observed changes are statistically significant we first need to establish hypotheses on what it actually means for them to be significant or not. Luckily these hypotheses could be similar to the ones we used in testing our other indicators.

H_0:	*There is no change in the average value for the attitude towards the role of the state in welfare distribution over the time period of 1994 to 2006.*
H_A:	*There is change in the average value for the attitude towards the role of the state in welfare distribution over the time period of 1994 to 2006.*

To test these hypotheses we do a two-sample independent t-test. We do this test separately for each country of study. For Japan we find Levene's significance of 0.558, this is over 0.05 and therefore we can assume equal variances in our t-test. The significance result for our t-test for Japan is 0.80. This is very far over both our alpha-level of 0.05 and 0.10. On the basis of this data we cannot reject the null-hypothesis and therefore cannot assume there is a change in the attitude towards the role of the state in welfare distribution in Japan. This seems very much due to the very small change in the variable.

For South Korea we find rather different results. First of all a Levene's significance within the bounds of 0.05, namely 0.021. This shows that we cannot assume equal variances in the t-test. Then for the t-test significance we find 0.000. Using an alpha-level of 0.05, this is small enough to be able to reject our null-hypothesis and state that there is a change in the average value for the attitude towards the role of the state in welfare distribution.

For Taiwan we can not assume equal variances as the Levene's significance result is 0.003, which is well within the 0.05 bounds. Moving on the the actual significance of the change, for the t-test significance we find 0.001. This is an interesting result and because it is within the alpha-level of 0.05 we can reject the null-hypothesis. This means that there is a change in the average value for the attitude towards the role of the state in welfare distribution in Taiwan.

Sub-conclusion

How did the attitude towards the role of the state in welfare distribution change between 1994 and 2006? For the changes in attitude towards the role of the government in welfare distribution we found very different results for each of the three countries. For one, the result was too small to be statistically significant, for the second it was negative and for the third it was positive. The changes that were statistically significant were rather small in the context of the scale they were on. So first, although the changes were statistically significant I think it would be too bold a statement to speak of groundbreaking changes. Second, the indicator changes in different directions for two different countries so it is not possible to draw a general conclusion on how it changed. The only statement we could make is that there is not a single distinguishable trend but minor changes in different countries.

7. Conclusion

In East Asia; what was the relation between the change in the social value of intergenerational solidarity and the attitude towards the role of the state in welfare distribution during the time period between 1994 and 2006? To answer this question we first investigated the changes in the variables separately in order to eventually test a hypothesis.

H_0:	*There is no relation between intergenerational solidarity and attitude towards the role of the state in East Asia.*
H_A:	*As intergenerational solidarity in East Asia decreases, support for a bigger role for the state in welfare distribution increases.*

As planned the changes in the indicators (table on the right) are used as the variables between which the correlation is calculated. First, for the attitude towards the role of the welfare state we used the change in the single indicator of government responsibility. Second, for the intergenerational solidarity we used the sum of the change in the two indicators. Using these variables results in a correlation coefficient of 0.85. This seems to imply a positive relationship, but if we look closer at the individual variables and changes we find something different. Before we address the individual indicators we should note that we expected to find a negative relation, thus also a negative correlation. Finding a positive relation gives us strong reason to look at the data and indicators why the expectation was so far off the actual result. First of all are not all the changes we find in the indicators statistically significant. This means that we cannot consider the change in these indicators to be a reliable sign of actual change in the population. Second, the changes we find for the attitude towards the role of the welfare state are inconclusive as to drawing a general conclusion in the direction of change. So for this variable we cannot say anything as to how it changes. As far as the social value of intergenerational solidarity is concerned we find that the results that are statistically significant point in a different direction than we anticipated. This is why we can neither reject our null-hypothesis nor adopt our alternative hypothesis. So concluding we can say that on the basis of the data in this study we do not have enough evidence to believe there is a relation between the social value of intergenerational solidarity and the role of the state in welfare distribution.

	Attitude role welfare state	**Sum int. gen. Solidarity**
Japan	0.043	0.433
South Korea	-0.328	0.263
Taiwan	0.483	0.437

8. Discussion

We have seen that the results we found in the study were not only insufficient to reject our null-hypothesis, but were evidence of a different movement. The premises of the main hypothesis was that intergenerational solidarity would decrease and with that the attitude towards the role of the state in welfare distribution would change. With this starting point derived from the literature not being accurate, it became impossible as well as senseless to test the hypothesis. This is not to say that the study did not produce any results, but it would not be complete without investigating why our expectations deviated rather radically from our findings. Basically this could be based broadly in two areas, first the validity of the study and second the theoretical framework.

When referring to the validity of the study the biggest concern is whether the indicators used provide a proper representation for the variables they should measure. As mentioned earlier in the text this is not such a big concern for the attitude towards the role of the state. Although the indicator used might not measure the entire concept I feel confident that can provide a proper indication for the attitude within a population. The indicators for intergenerational solidarity, however, do not enjoy the same amount of confidence. The main concern is that they measure mostly attitude and not actual action, while Silverstein and Bengtson (1997) mention seven dimensions of which many are based on actual actions instead of attitudes. This could certainly impact the score we get on this variable. It is strange however that it does not change in magnitude but actually in direction. This leads us to look at the possible second cause of the discrepancy between expectation and result.

The expectation of a decreasing intergenerational solidarity is based on statements in the literature that the East Asian society is individualizing and converging towards more western values (Aspalter, 2006; Croissant, 2004; Holliday, 2000). With the data this does not seem to be the case exactly. A possible explanation for this is that many of these articles build on a framework by Esping-Anderson (Holliday, 2000; Aspalter, 2006) that was designed first and foremost with the western world in mind, and not so much the Asian world of the countries that were investigated here. This could be a good hint for further investigation of the future of the East Asian welfare model as predictions of unsustainability (Croissant, 2004) because of loss of strength of the familial aspect may be unfounded.

Another threat to the validity of the findings of the study was also mentioned before. The number of test-instances is small at only two. With this there is the risk that the findings are a temporary effect and are not representative for a longer time period. Adding more test-instances would greatly diminish this risk and might help rejecting or approving the results of this study. One way to do this would be to await a next wave of the World Values Survey and use it as another instance. One could also look to find other data-sources for social attitudes and use those to compile more test-instances.

This suggests a number of possibilities for further research. First a new study might focus more on perception of the welfare state in East Asia in general. This research was not able to come to a conclusion about the direction of change. A new study could focus on the questions whether the countries in this study (and maybe others in East Asia) are not as similar on this aspect as they are treated in this research or whether maybe the attitude towards the welfare state is not changing at all in the region.

9. Literature

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10. Appendices

10.1 Appendix I

Averages for indicators

		Government responsibility	Make Parents Proud	Importance of Family
Japan	Wave 1	6.935	2.307	3.899
	Wave 2	6.978	2.723	3.916
South Korea	Wave 1	7.8	2.688	3.9
	Wave 2	7.472	2.93	3.921
Taiwan	Wave 1	5.497	2.732	3.763
	Wave 2	5.98	3.025	3.907

Changes in the indicators

	Government responsibility	Make Parents Proud	Importance of Family	Sum int. gen. Solidarity
Japan	0.043	0.416	0.017	0.433
South Korea	-0.328	0.242	0.021	0.263
Taiwan	0.483	0.293	0.144	0.437

Correlation Coëfficient: 0.85119259

10.2 Appendix II

SPSS-output for two-sample independent t-tests

Output for question 2a (Japan):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Work:make parents proud	Equal variances assumed	54.822	.000	12.201	1825	.000	.411	.034	.345	.477
	Equal variances not assumed			12.369	1810.945	.000	.411	.033	.346	.477

Output for question 2a (South Korea):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
One of main goals in life has been to make my parents proud	Equal variances assumed	64.409	.000	8.793	2436	.000	.268	.030	.208	.327
	Equal variances not assumed			8.804	2431.466	.000	.268	.030	.208	.327

Output for question 2a (Taiwan):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
One of main goals in life has been to make my parents proud	Equal variances assumed	130.421	.000	10.013	1972	.000	.296	.030	.238	.353
	Equal variances not assumed			9.562	1364.761	.000	.296	.031	.235	.356

Output for question 2b (Japan):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Importance: family	Equal variances assumed	6.604	.010	1.337	2122	.181	.019	.014	-.009	.047
	Equal variances not assumed			1.335	2097.160	.182	.019	.014	-.009	.047

Output for question 2b (South Korea):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Family important	Equal variances assumed	11.134	.001	1.651	2442	.099	.020	.012	-.004	.043
	Equal variances not assumed			1.655	2420.454	.098	.020	.012	-.004	.043

Output for question 2b (Taiwan):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Family important	Equal variances assumed	241.124	.000	8.259	2002	.000	.148	.018	.113	.183
	Equal variances not assumed			7.645	1255.196	.000	.148	.019	.110	.186

Output for question 1 (Japan):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Responsibility	Equal variances assumed	.344	.558	.259	2054	.795	.028	.108	-.184	.240
	Equal variances not assumed			.259	2046.891	.795	.028	.108	-.184	.240

Output for question 1 (South Korea):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Government more responsibility	Equal variances assumed	5.368	.021	-4.319	2437	.000	-.415	.096	-.603	-.227
	Equal variances not assumed			-4.317	2428.554	.000	-.415	.096	-.604	-.226

Output for question 1 (Taiwan):

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
Government more responsibility	Equal variances assumed	8.620	.003	3.309	1989	.001	.389	.118	.159	.620
	Equal variances not assumed			3.375	1734.629	.001	.389	.115	.163	.616