

Duverger's Law

Empirical Evidence

Recall that electoral system is expected to have an effect on the party system for 3 reasons

- Mechanical Effect
- Strategic Voting
- Strategic Entry

The Mechanical Effect

- In SMDP systems, the way votes get translated into seats rewards large parties and punishes small parties.

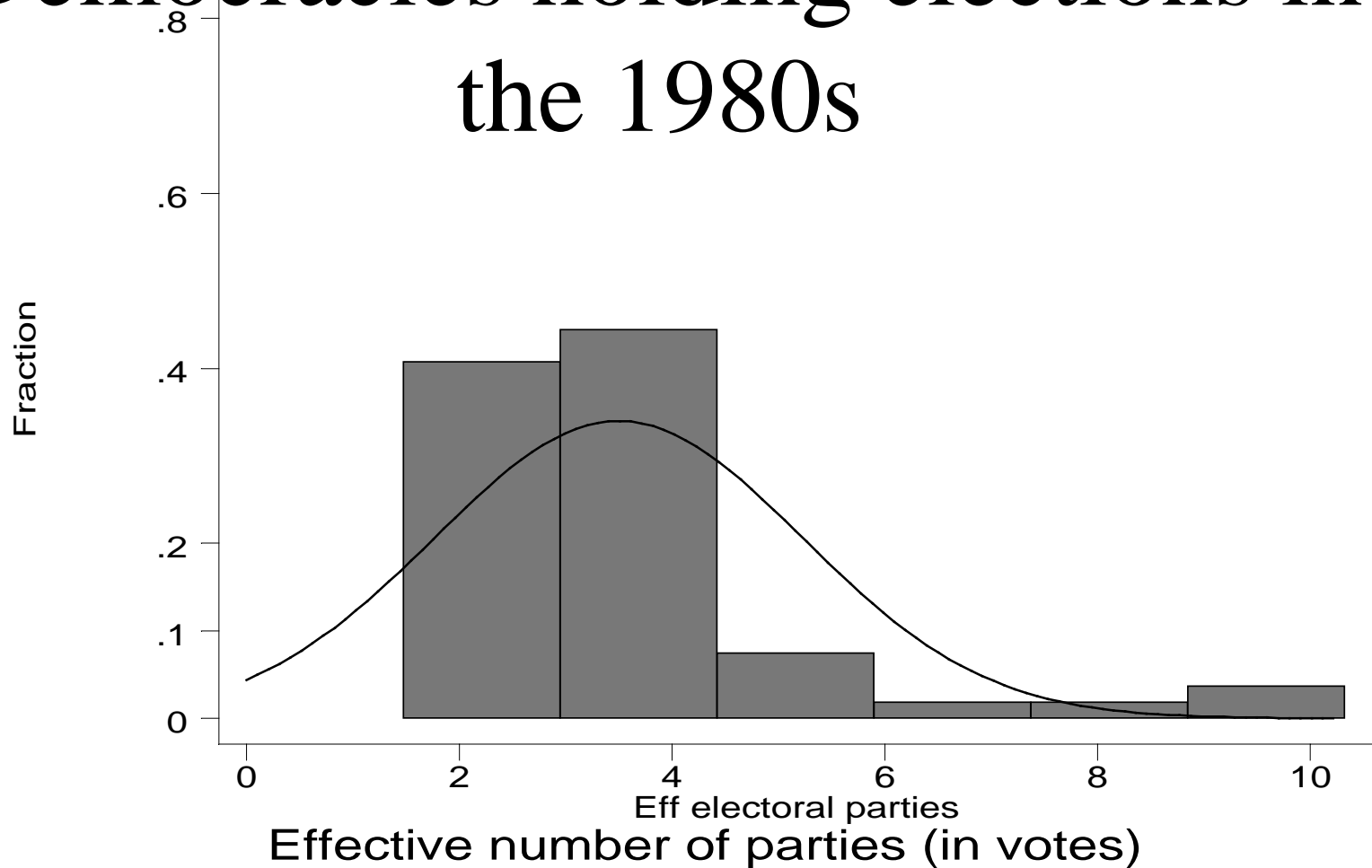
Thus, the key issue here is how votes for parties in the *electorate* get turned into seats for parties in the *legislature*.

We'll call a legislature "Representative" if the partisan distribution of seats represents the partisan distribution of votes.

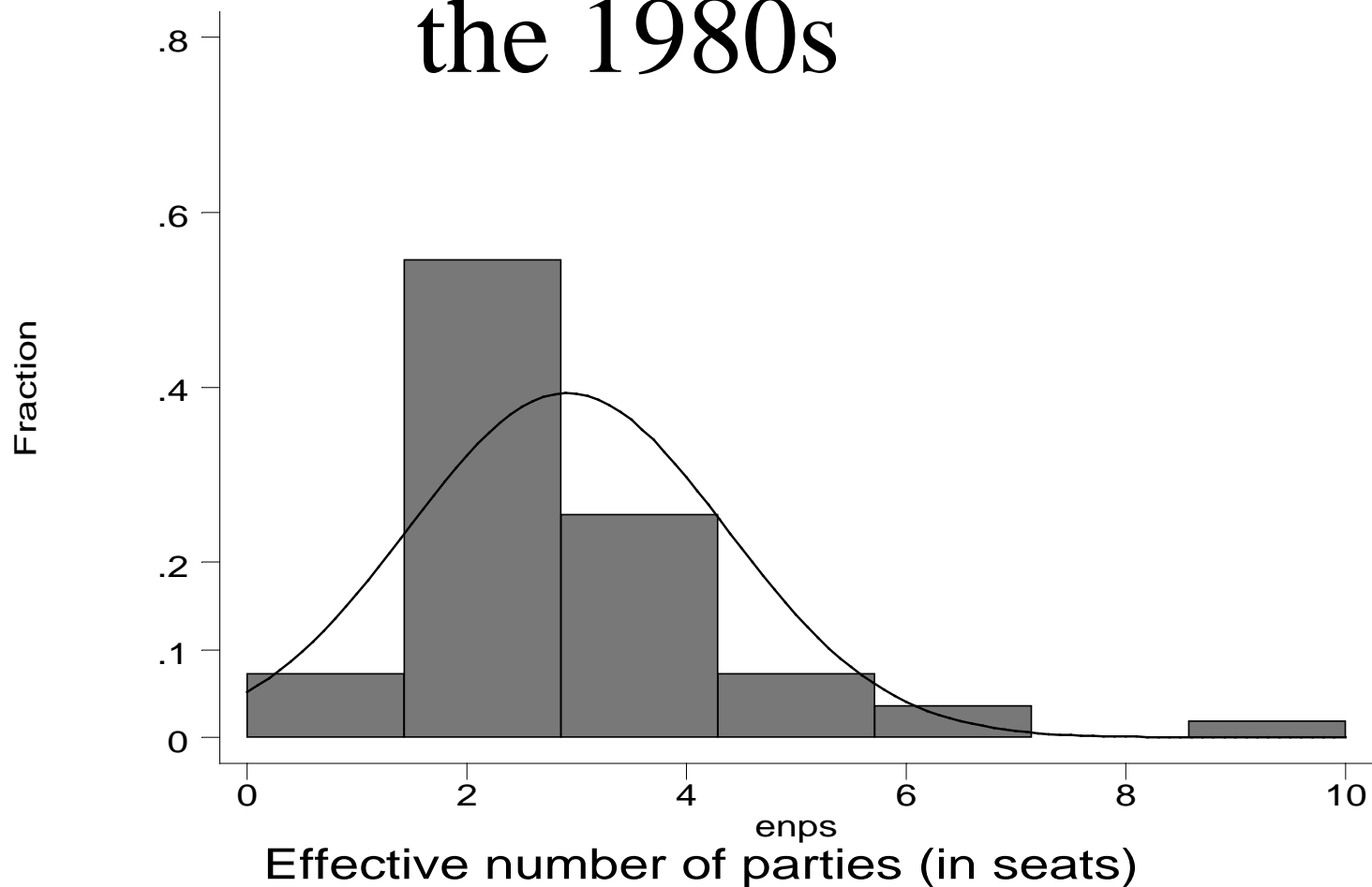
To Measure the partisan distribution of votes and seats, we'll use a common measure: The Effective Number of parties.

- Weights the number of parties by the share of votes or seats its gets
- An N party system with two equally strong parties has N Effective number of parties
- But a 5 party system where 2 parties evenly divide almost all the votes (or seats) would have an effective party measure close to 2

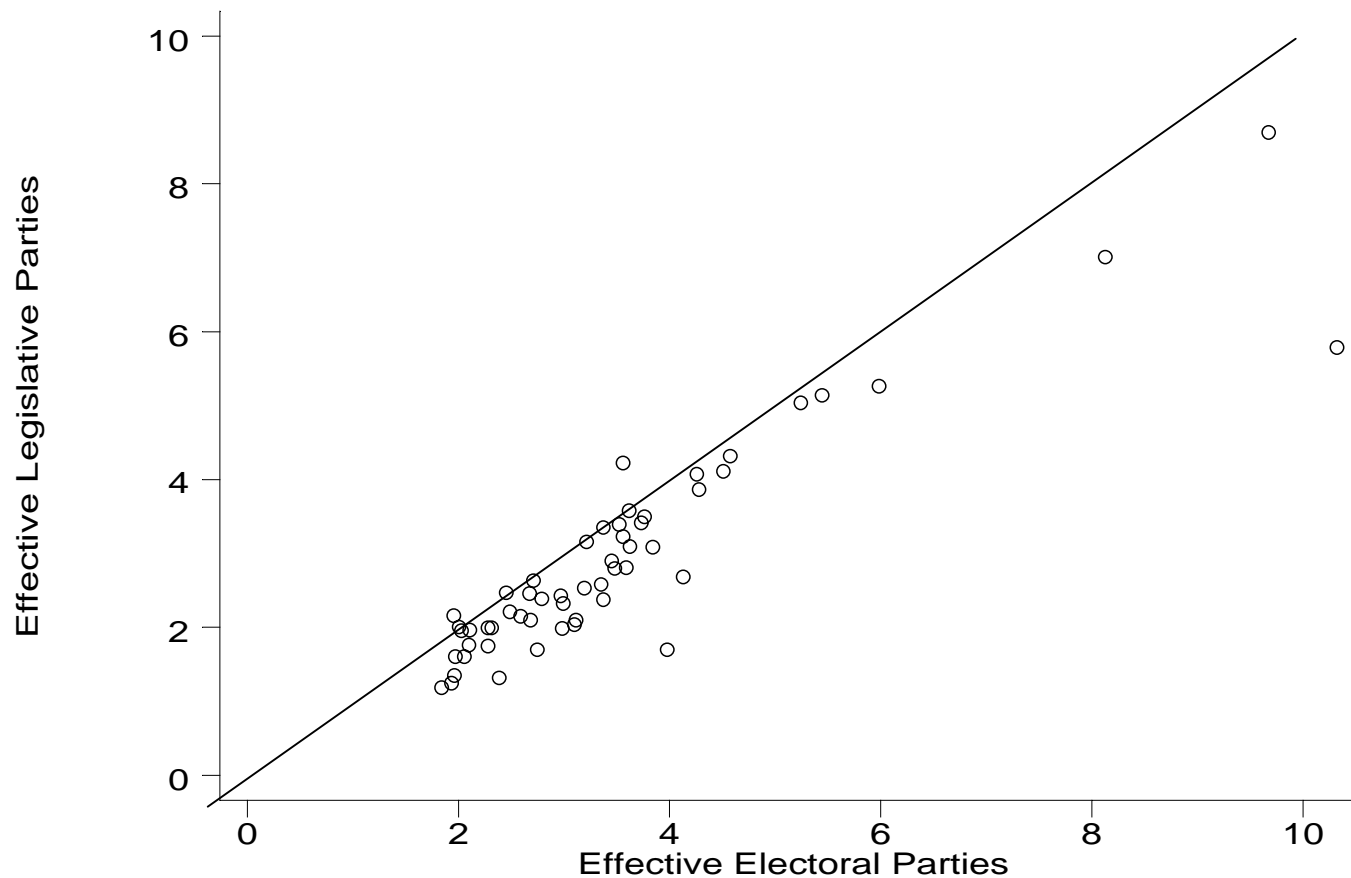
Distribution of Effective Number of Electoral Parties in 54 Democracies holding elections in the 1980s



Distribution of Effective Number of Legislative Parties in 54 Democracies holding elections in the 1980s



A Legislature is “Representative”
if the legislature “looks like” the
electorate



Overall, there seems to be a close relationship, but how close? Regressions analysis allows us to say with some precision.

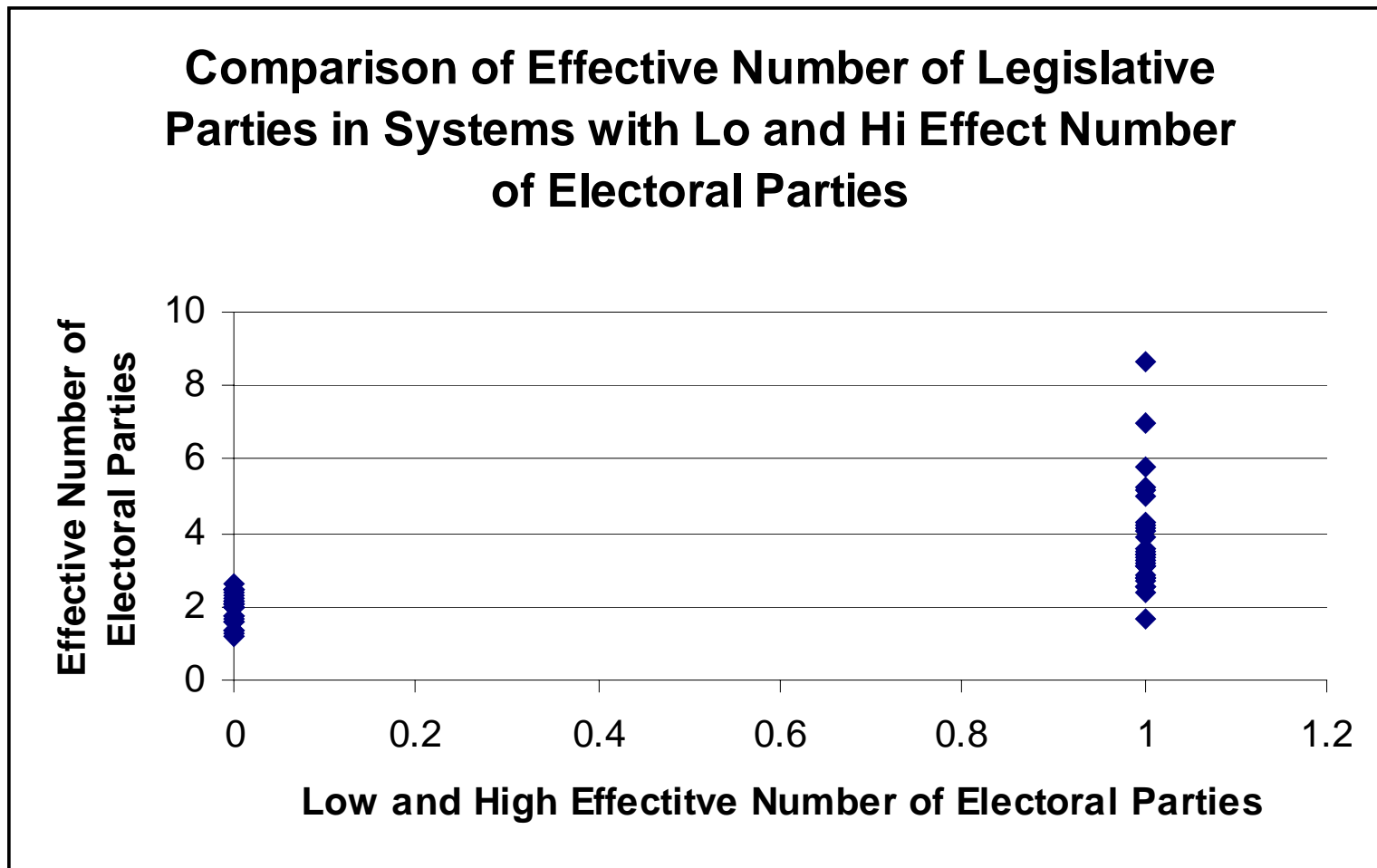
- If the system was “perfectly” representative, we’d expect the allocation of seats to parties to match the allocation votes to parties:

$$Enps = Enpv$$

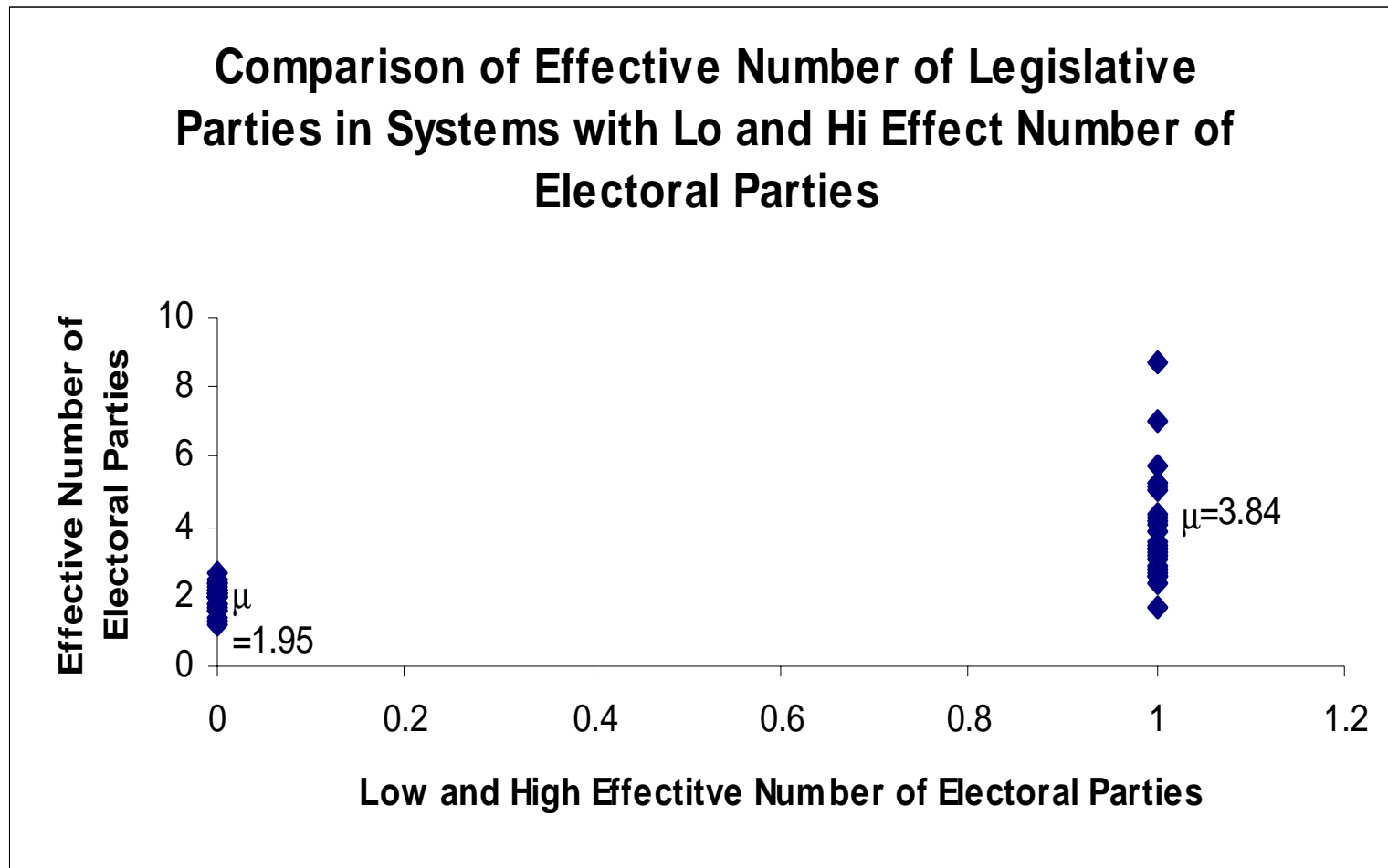
Regression analysis allows us to examine the extent to which this is true, by estimating the linear relationship between the independent and dependent variables:

$$Enps = a + b(Enpv) + e$$

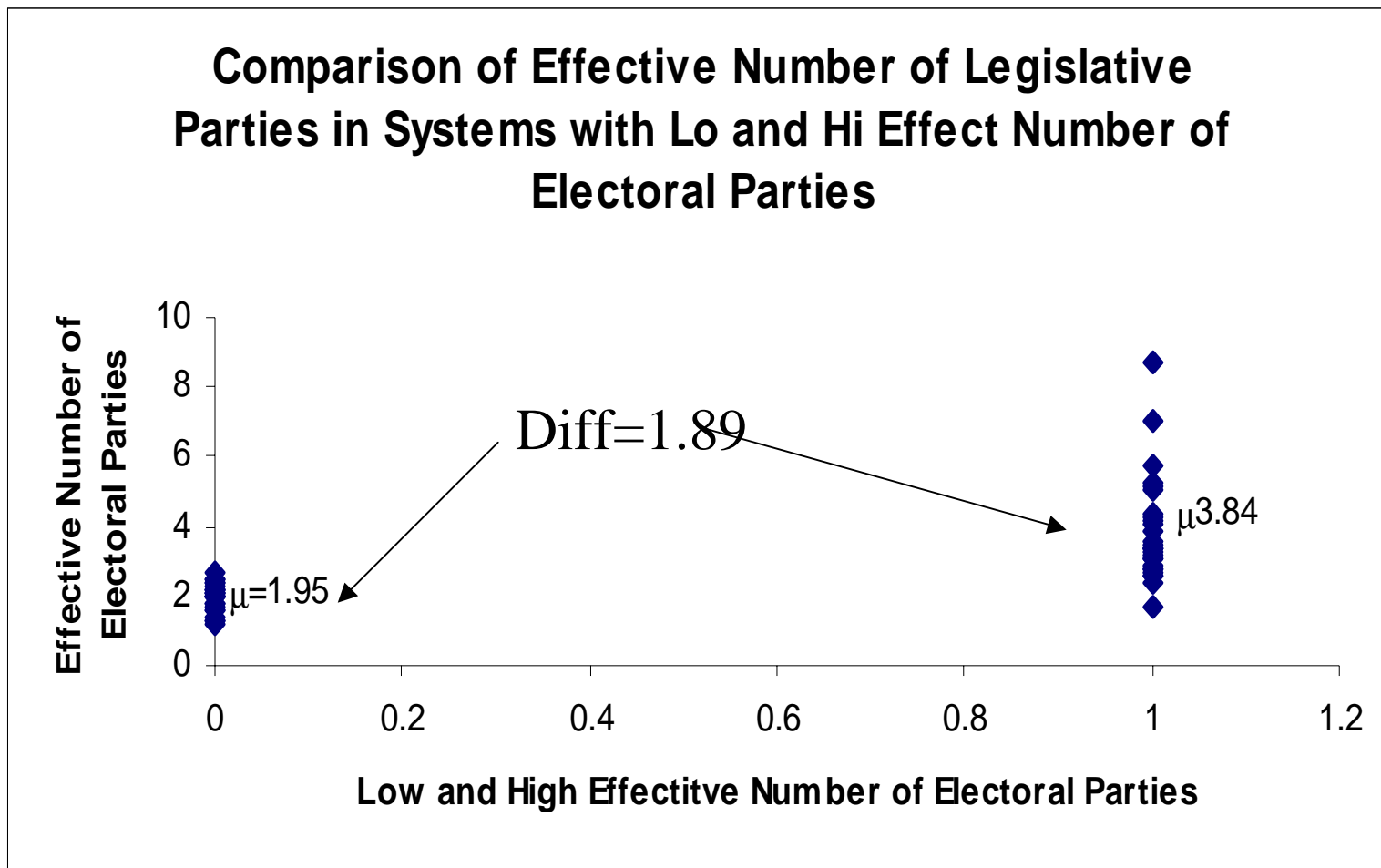
Imagine we could divide $Enpv$
into “high or low”



We could compare the means of the two groups in terms of *Enps* and see if they were different.



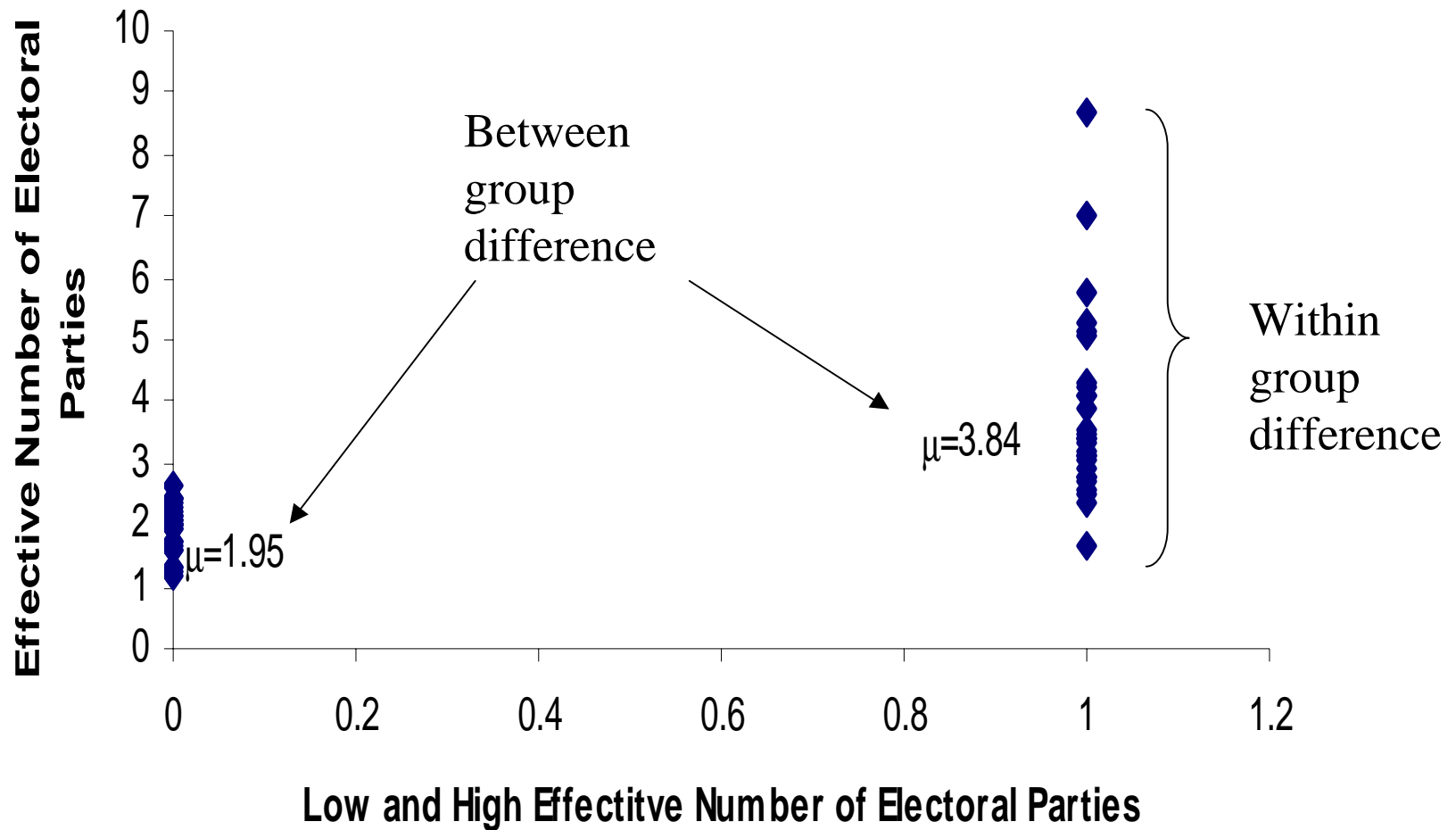
There is an observed difference in the sample



But is the observed difference big enough to convince us that the difference in the population of cases is not zero?

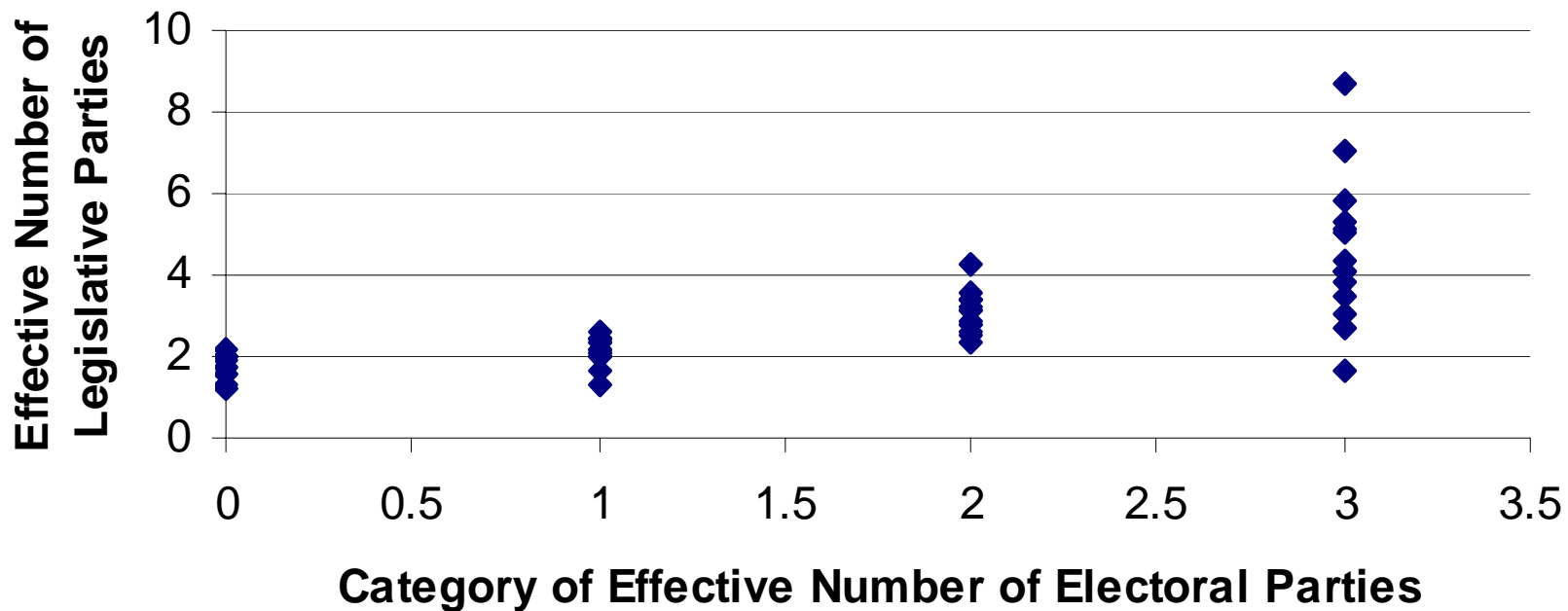
- To determine this, we compare the within group variance and the between group variance, this gives us a confidence interval around the observed difference.

If between group difference is large compared to within group difference, we can be confident that the difference in

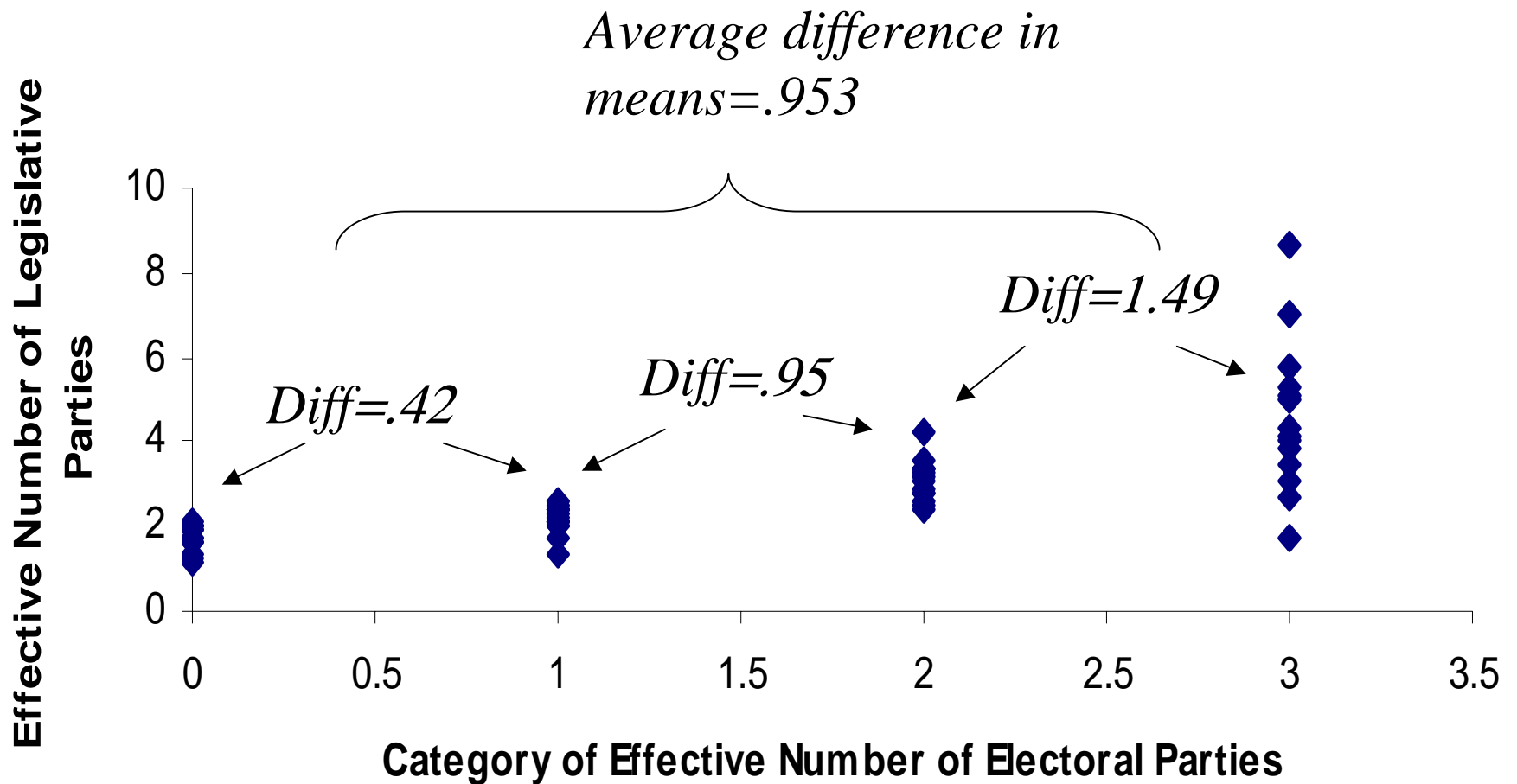


What if we could divide $Enpv$ into 4 groups?

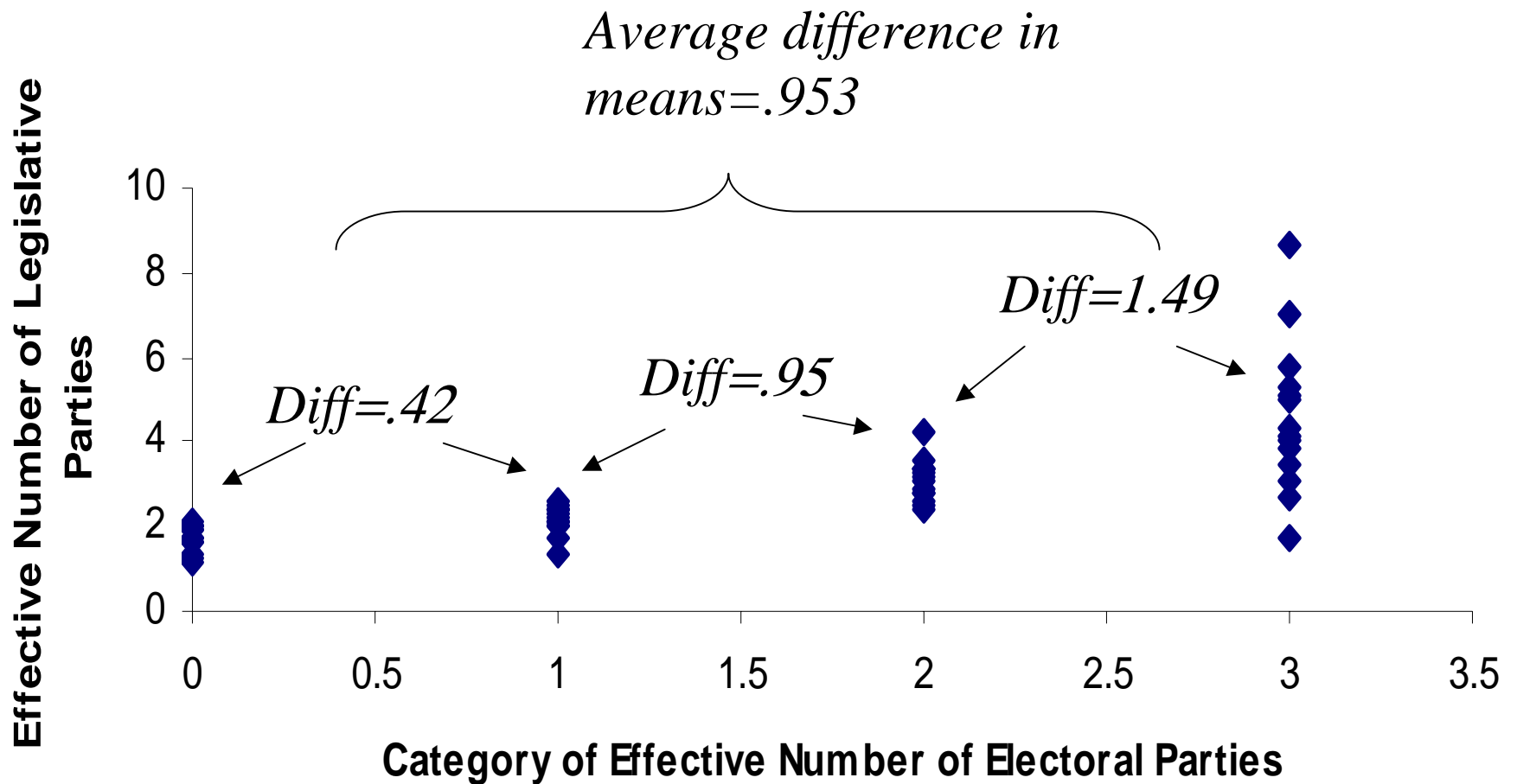
Comparison of Effective Number of Legislative Parties in Systems with various levels of Effective Number of Electoral Parties



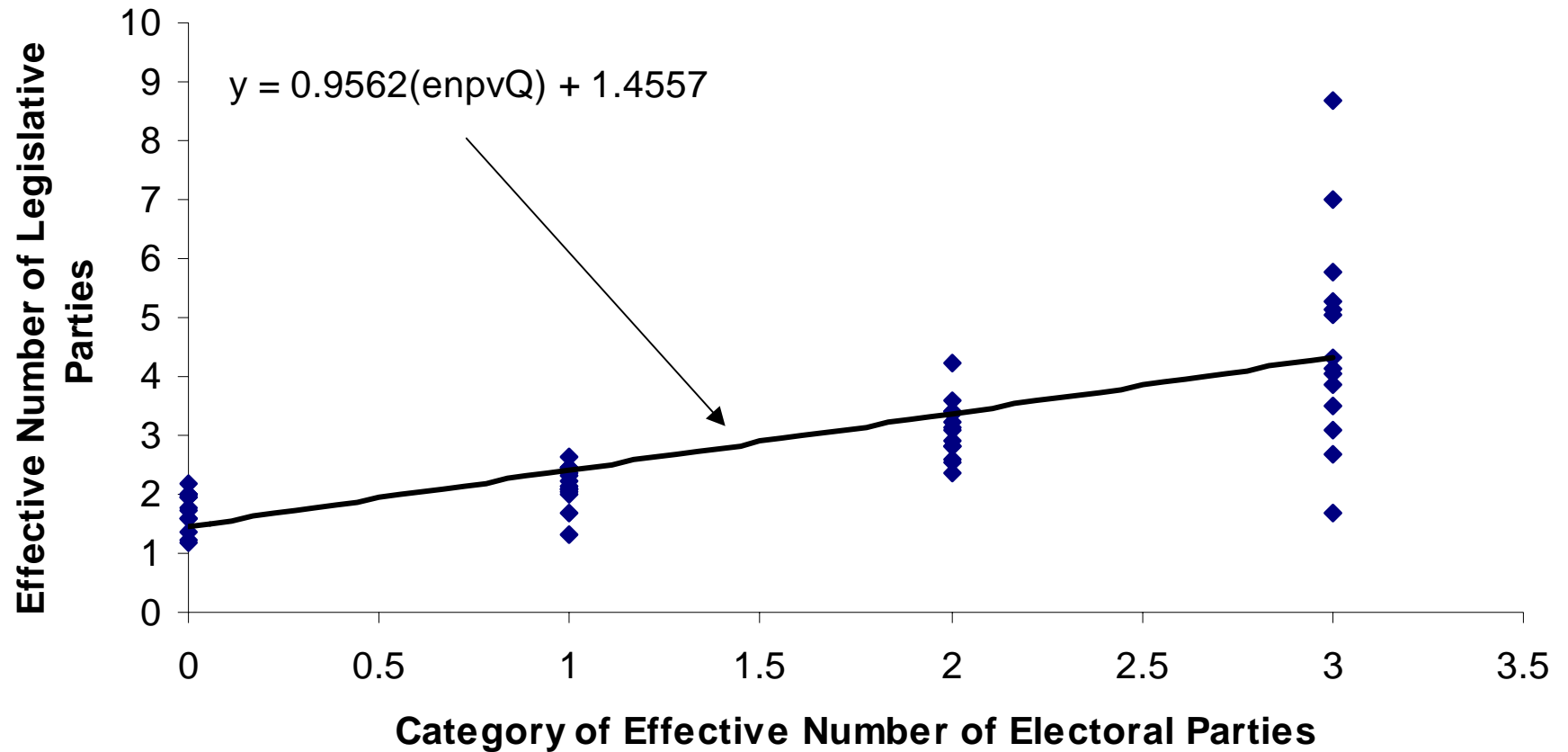
You'd get a different difference in mean for each group change



But, we're unlikely to have a different theoretical expectation about the change in Y for each change in X



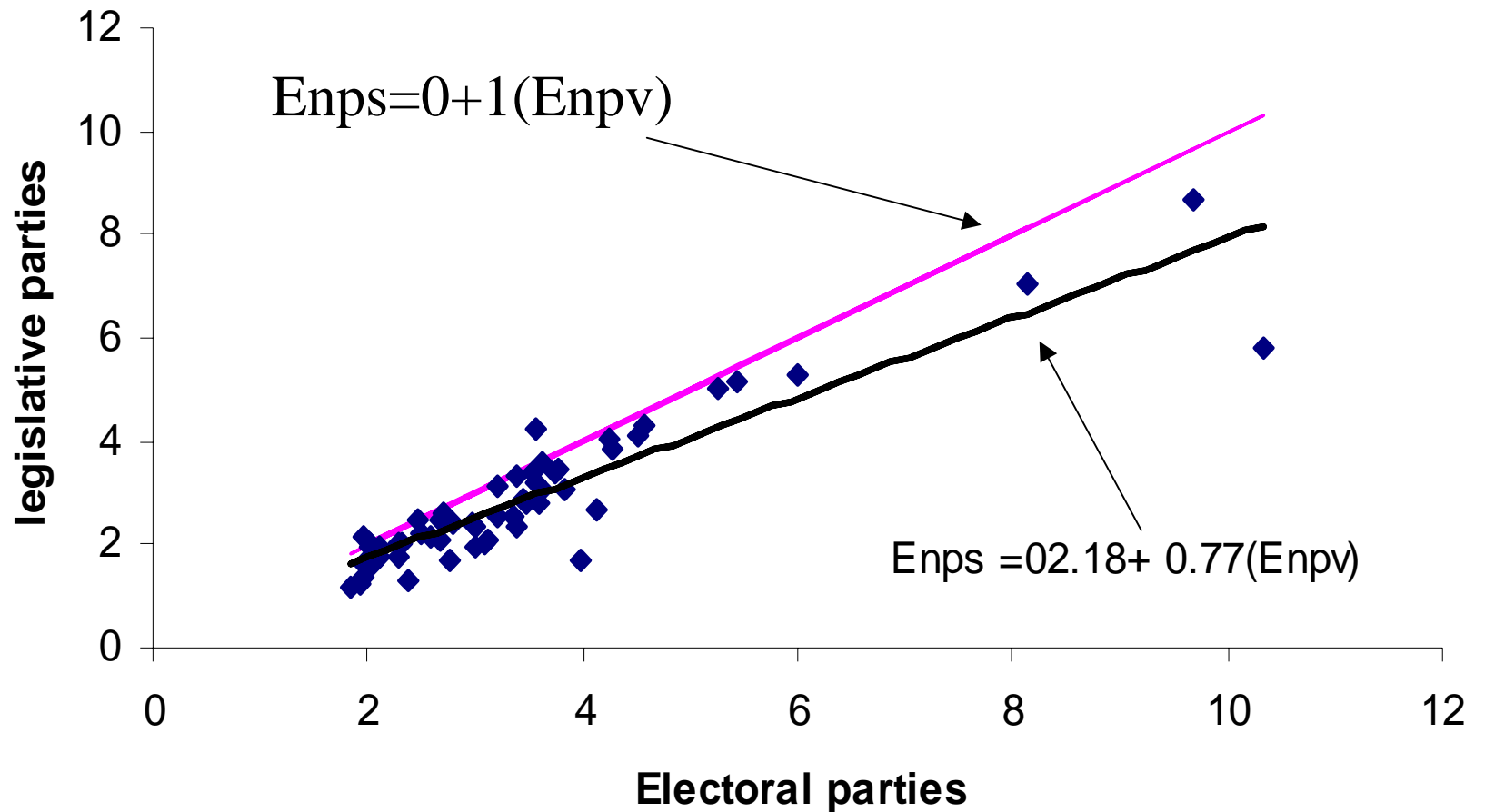
This “average difference in means” or “estimated causal effect” is what Regression Analysis give us



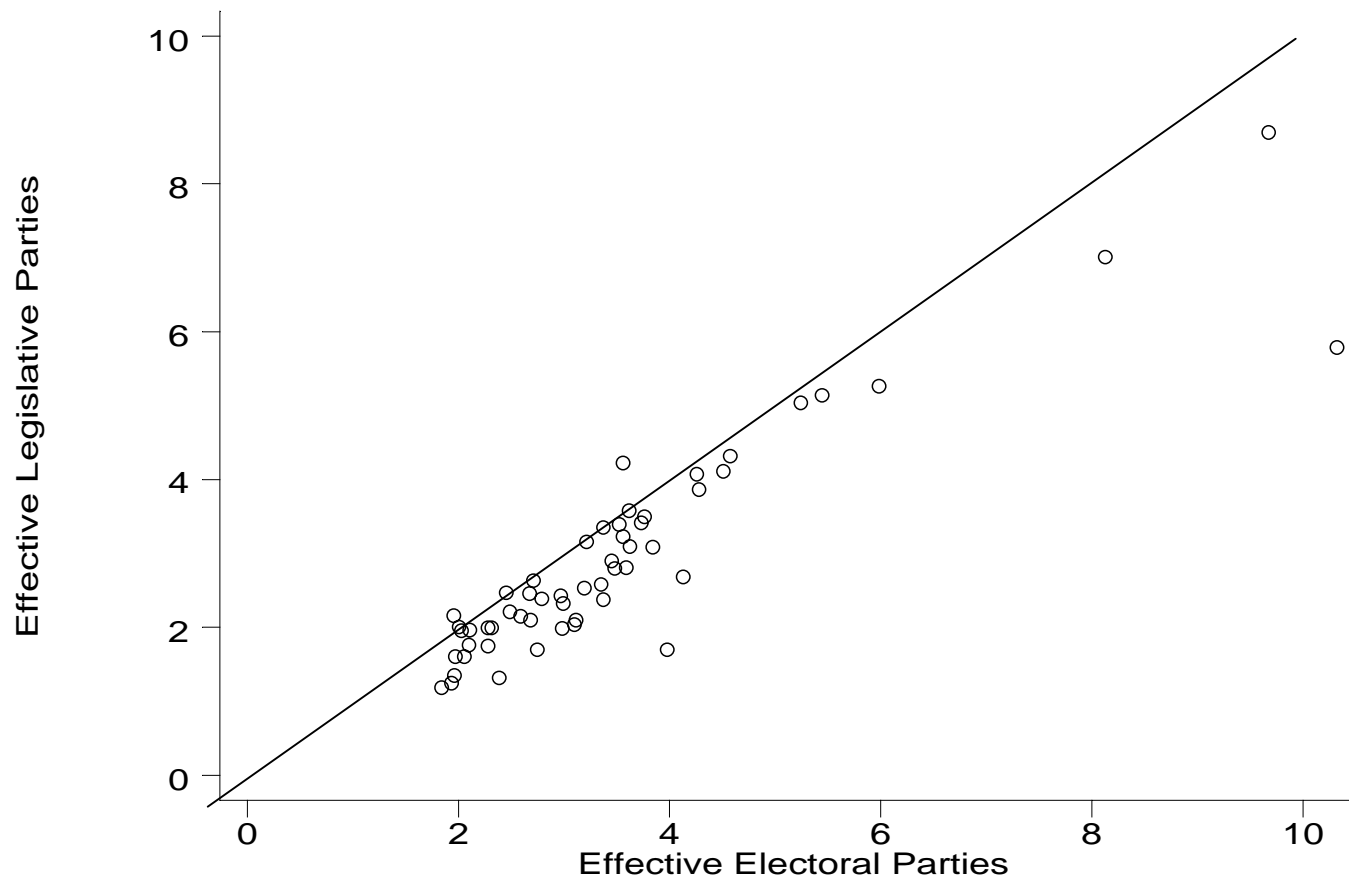
Now, we can continue to break *Enpv* into smaller groups until we have a continuous variable....

- Then we would have a context for understanding the scatter plot I up up originally

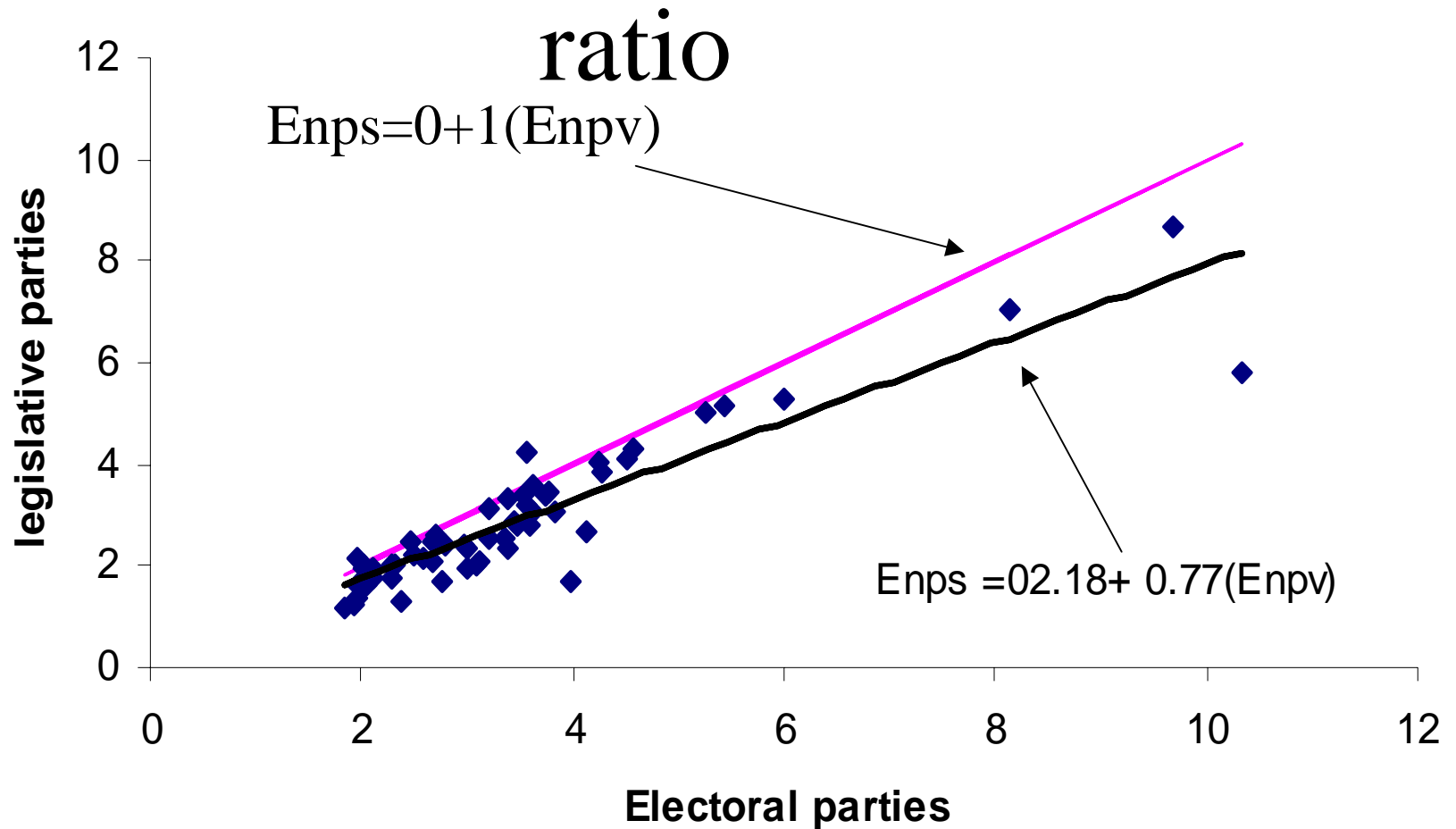
Now we have a context for interpreting the original scatter plot



Obviously, there is some “unrepresentativeness” in all systems that fall off the 45 degree line, but how do ‘representative’ on average, are electoral systems?



Observed systems translate votes into seats at a less than 1 to 1



The mechanical effect explanation of Duverger's law says that proportionality of the party system is a function of the proportionality of the electoral system. That is, the slope of the line for single candidate systems is FLATTER than it is for multi-candidate systems.

So we're going to need a more complicated model – one in which the estimated causal effect of votes on seats depends on the electoral system.

$$Enps = a + b1(enpv) + b2(smdp) + b3(enpv*smdp)$$

Then the expected number of parties when smdp = 0 is

$$Enps = a + b1(enpv)$$

and b1 is the "estimated causal effect of an additional electoral party on the number of legislative parties for multi candidate electoral systems

The expected number of legislative parties when smdp = 1 is

$$Enps = a + b2(1) + b1(enpv) + b3(enpv*1)$$

or

$$Enps = a + b2 + b1*(enpv)(b1 + b3)$$

Effective Legislative Parties

Enpv	0.453 (0.00)**
Log Median Magnitude	-0.266 (0.04)*
Enpv* Log Med Mag	0.139 (0.00)**
Constant	0.885 (0.00)**

The effect of District Magnitude on the “representativeness of electoral system:”

Log district mag	District Mag	Example	“representativen ess ratio”
0	1	UK, US	.45
1	3 or 4	Japan, Ecuador	.59
2	8	Belgium	.73
3	24	Italy, Czech Rep.	.86
4			1.00
5	120 o5 150	Israel, Netherlands	1.14