Pet Study - 'Pet Ownership as Economic Factor'

The economic significance of pet ownership in Germany

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Pet ownership in Germany generates annual sales turnover of over 9.1 billion euro, therefore sustaining approx. 185,000 to 200,000 jobs (full-time equivalent).

- Pet food and accessories: approx. 4.8 billion euro
- Pet health: approx. 2.1 billion euro
- Pet breeding: approx. 560 million euro
- Providing services for pets: approx. 700 million euro
- Other turnover in the context of pet ownership: approx. 520 million euro
- Pet shelters and dog taxes: approx. 450 million euro

Expenditures directly or indirectly connected to pet ownership account for about **0.32 percent of Germany's GDP**

- **Dog ownership** (approx. 4.6 billion euro turnover/95,000 – 100,000 jobs)
- **Cat ownership** (approx. 3.3 billion euro turnover/approx. 65,000 – 72,000 jobs)
- **Other pets** (approx. 1.2 billion euro turnover/approx. 25,000 – 27,000 jobs)

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Preamble

The way people handle their animals/ pets is subject to constant change and influenced by many factors - social, demographic, public and economic. Some of what has been considered a mere farm/work animal or even 'pest' in the past, is today pampered and cared for in many households - they enrich our lives and are highly valued.

Difficult to measure are the uncountable moments of happiness that pet owners experience in the daily co-existence with their animals, the positive aspects of pets for the physical and psychological health (especially with children, sick and old people), the unquantifiable increase in quality of life that guide dogs or assistance dogs give their owners, as well as the tireless deployment of rescue dogs, service dogs, guard dogs or hunting dogs in the service of humans and to enhance their well-being.

One indication how much they are appreciated are the expenditures that pet owners are willing to invest in their 'hobby'. Against this background, this study sets out to capture the relevance of all expenditures/ turnover in direct or indirect correlation with pet ownership. This was done in order to quantify the overall economic importance of our pets and their relevance for the production, value creation and employment in Germany.[1]

People who like pets do not need to be convinced by this study. However, the results will show people who can or want to think only in 'economic terms', that pet ownership is not only worthwhile from a social but also from a commercial viewpoint.

This study would not have been possible without the support of many people and institutions willingly providing numbers, figures and information, answering questions on the phone, recommending contacts and taking part in pet owner surveys. Not to forget the countless helpers involved in Internet research and those distributing and analyzing the questionnaires. A big thank you to all. In spite of everything, not all the information we had hoped for was available, which means the data basis we used was not always satisfactory. In addition, many numbers are based on sample estimates, some on plausibility considerations, so that some estimates may be prone to errors. The responsibility for potential errors lies with the author of the study.

Renate Ohr
Göttingen, November 2014

[1] A predecessor of this study is the so-called 'dog study' (R. Ohr and G. Zeddies, *Zur Ökonomischen Gesamtbetrachtung der Hundehaltung in Deutschland*, Göttingen 2006), which until today is still referenced in the media. The study at that time was based on much less information, and thus on much more precarious estimates. Therefore, in some areas, e.g. the figures for home-prepared food, the results are much different today, as they are footed on more solid data.

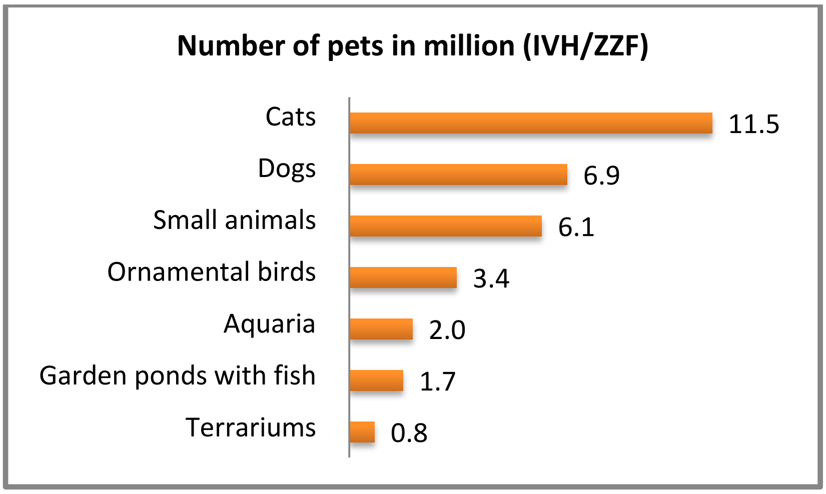
Chapter 1:
Pet Ownership in Germany: Some Socio-Economic Facts

For starters, some general facts on pet ownership in Germany are presented, as they ultimately are also important in considering the overall economic relevance.[2]

A) Pet population

To capture the economic significance of pet ownership, it is necessary to initially form a realistic picture of the number of dogs, cats and other animals such as ornamental birds & fish, terrarium animals and small animals (including pygmy rabbits, hamsters, guinea pigs, ferrets and others), which are kept as pets. A **population study**[3] commissioned by the *Industrieverband Heimtierbedarf* (IVH/ Industrial Association of Pet Care Producers) and *Zentralverband Zoologischer Fachbetriebe* (ZZF/ German Pet Trade & Industry Association) assumes the number of pets owned in Germany in 2013 to be as follows:

Illustration 1



Source: Skopos 2014 (www.ivh-online.de/de/home/der-verband/daten-fakten.html)

Accordingly, the number of cats is estimated at 11.5 million, the number of dogs 6.9 million. And the 6.1 million small animals are split, according to this study, into approx. 3 million pygmy rabbits, approx. 1.3 million guinea pigs and approx. 0.7 million hamsters, plus - in low

[2] The Mars Pet Study 2013 *'Hund-Katze-Mensch, Die Deutschen und ihre Heimtiere'* (published by Mars Petcare, Verden, 2013) provides a very illustrative and comprehensive representation and analysis of human-pet relationships (over and above the economic aspect). Another current, very broad and sociologically underpinned study was done by Maria Simeonov: *'Die Beziehung zwischen Mensch und Heimtier'*, Springer Verlag, 2014, and finally to mention the dissertation by Ulrike Pollack *'Die städtische Mensch-Tier-Beziehung: Ambivalenzen, Chancen und Risiken'*, TU Berlin, 2009.

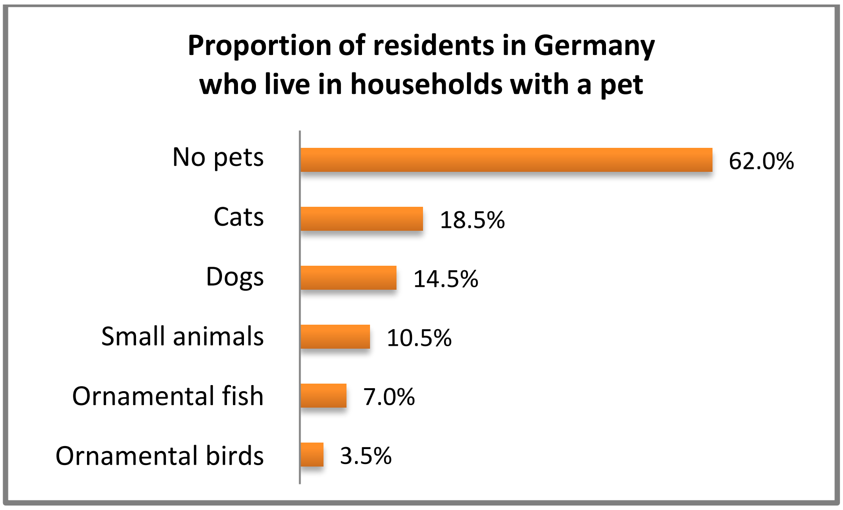
[3] Skopos, 2014. Built on a random sample of 3,000 interviewees/respondents in 2013.

proportions - mice, rats, chinchillas, degus, ferrets and others. (This distribution of small animals also closely reflects our own pet owner survey (see Chapter 10)).

As part of the **Socio-Economic Panel (SOEP)**, a survey regularly carried out[4] by *Deutsches Institut für Wirtschaftsforschung* (DIW/ German Institute for Economic Research) and used for a variety of considerations in science, there was an additional question in 2011 asking to what extent the surveyed households were keeping pets. However, as the number of respective animals in each household was not queried at that time, no direct statements can be derived regarding the total population. In terms of population figures, the basis will therefore continue to be the current study of the IVH/ZZF, which will also be determining these numbers annually in the future.

However, the SOEP surveys can be used to determine other socio-economic data in connection with pet ownership. In 2011 - the scale of these figures generally changes very slowly - the following relevance of pet ownership in Germany was determined (see Ill. 2).

Illustration 2



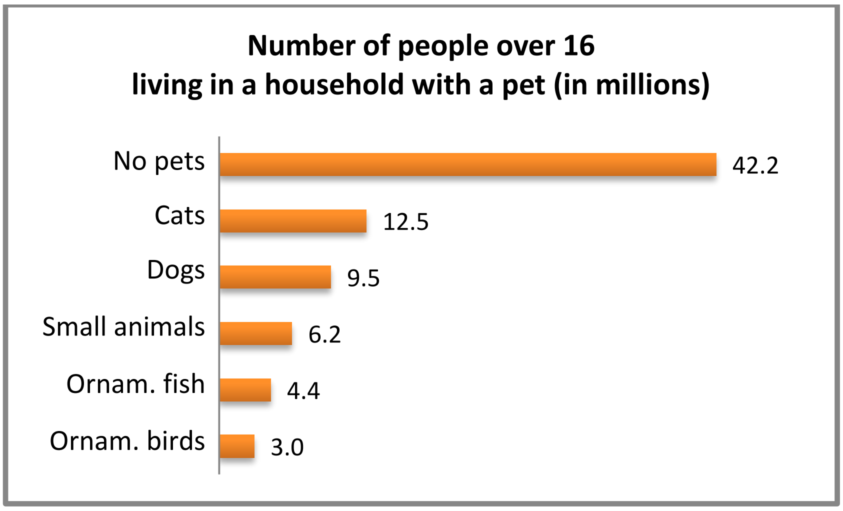
Source: SOEP, survey 2011, own computations; Percentages add up to more than 100%, as sometimes several animal species live in one household.
(Terrarium animals are not shown separately here, but are included in the number of small animals.)

This shows that 18.5 percent of Germany's residents live in households with one (or several) cats, approx. 14.5 percent of Germany's residents live in households with at least one dog, and approx. 62 percent live in homes with no pets at all.

Focusing on the adults (over 16 years of age) who are ultimately responsible for taking care of the pets, and as such relevant for the spending behavior, it shows that e.g. almost 9.5 million adults in Germany live in a household with a dog and about 12.5 million in a household with a cat (Ill. 3).

[4] An annual representative survey on various socio-economic data with 12,000 households and over 20,000 people in Germany.

Illustration 3

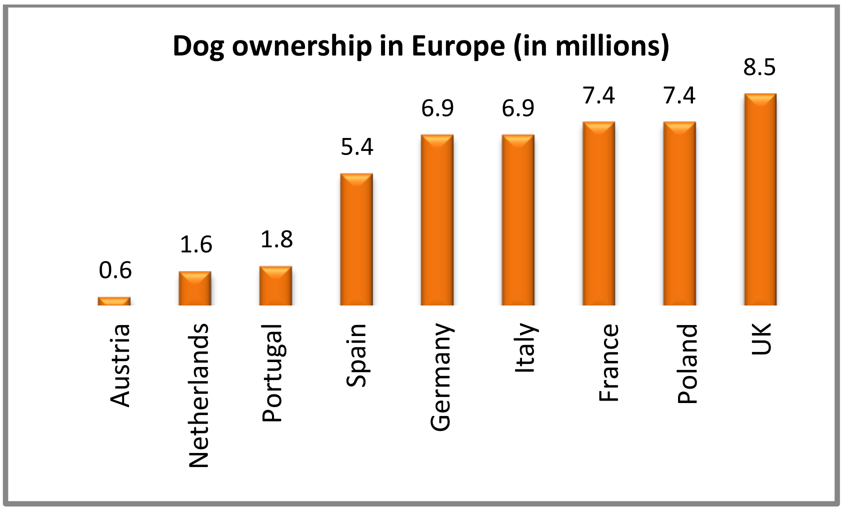


Source: SOEP, survey in 2011, own computations.
(Terrarium animals are not shown separately here, but are included in the number of small animals.)

B) European comparison

Compared with overall Europe, clear differences in pet ownership between the individual countries emerge.[5] For example, in other European countries dog ownership plays a much larger role than in Germany. In absolute numbers, France, Poland and Great Britain, for instance, have more dogs than Germany (see Ill. 4).

Illustration 4



Source: FEDIAF, Brussels; Facts and Figures 2012; Numbers for Germany: 2013 (IVH/ZZF)

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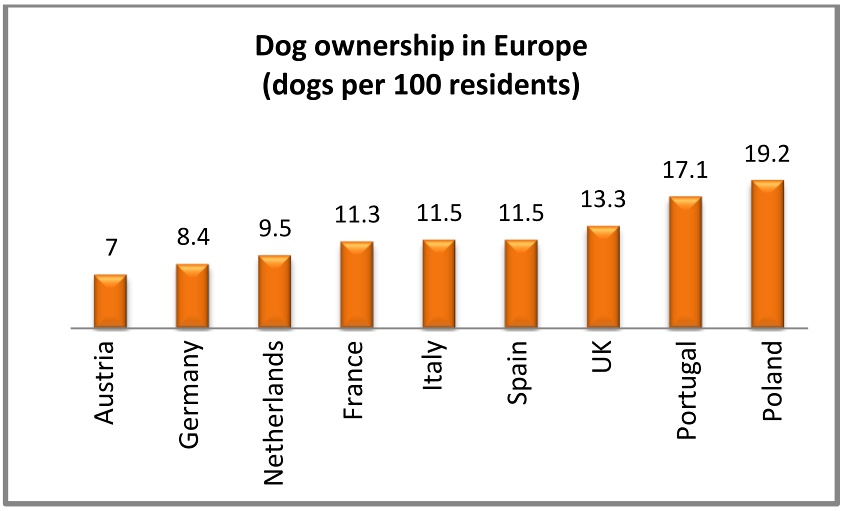
[5] However, it must be considered that the following numbers were determined using different methods of collecting data in the individual countries, and therefore, are not always fully comparable across the board.

Of course, the size of the country also plays a role. Since we are a comparatively densely populated country, the absolute number of dogs is naturally higher than in much smaller countries. However, in relation to the number of residents, we obviously have relatively few dogs; only Austria has a lower 'dog density'. All other countries have - per 100 residents - clearly more dogs than Germany (see Ill. 5).

Illustration 5



Source: FEDIAF, Brussels; Facts and Figures 2012; Numbers for Germany: 2013 (IVH/ZZF); Population figures from eurostat; Own computations

As for **cat ownership**, the situation is not so clear cut. In absolute numbers, Germany tops the list (see Ill. 6), and in relation to residents is somewhere in the middle. Some countries - France, Austria, the Netherlands – have more cats per 100 residents; whereas in countries such as Italy, United Kingdom and Spain, people own fewer cats than in Germany (see Ill. 7).

Illustration 6

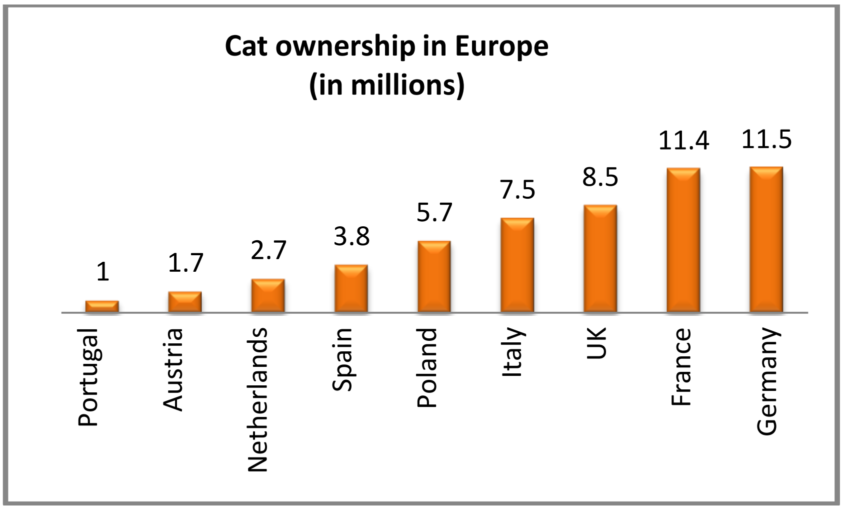
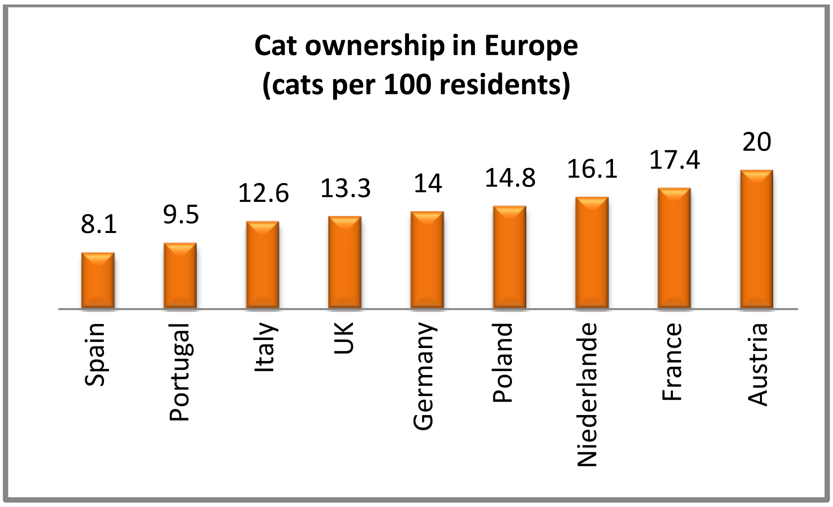


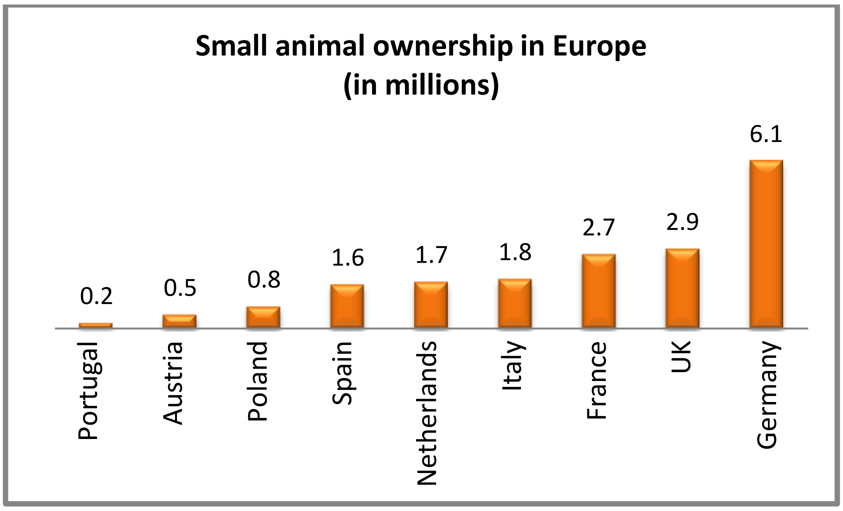
Illustration 7



Source: FEDIAF, Brussels; Facts and Figures 2012; Numbers for Germany: 2013 (IVH/ZZF);
Population figures from eurostat; Own computations

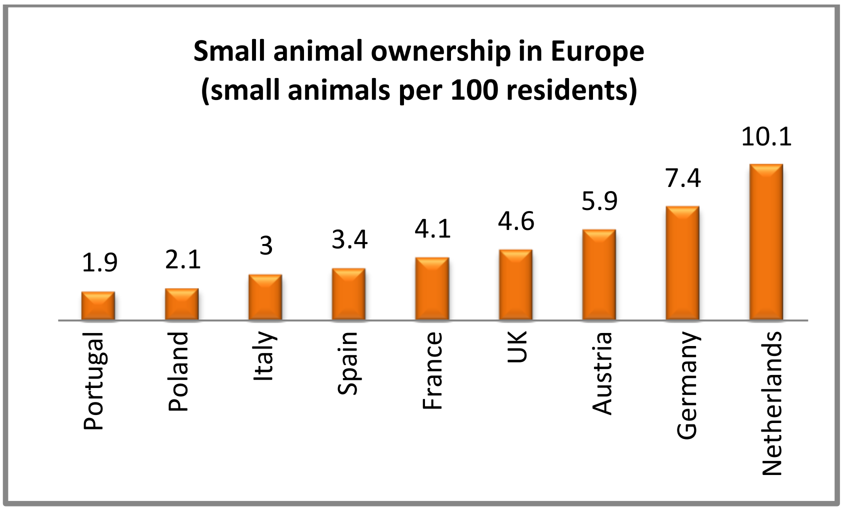
In terms of small animals - captured are predominantly rodents such as pygmy rabbits, hamsters, guinea pigs, etc. - Germany is high on the list, both in the absolute number of animals and in relation to the number of residents, surpassed only by The Netherlands with an even larger, relative importance of small-animal pets (Ill. 8 and 9).

Illustration 8



Source: FEDIAF, Brussels; Facts and Figures 2012; Numbers for Germany: 2013 (IVH/ZZF);
Population figures from eurostat; Own computations

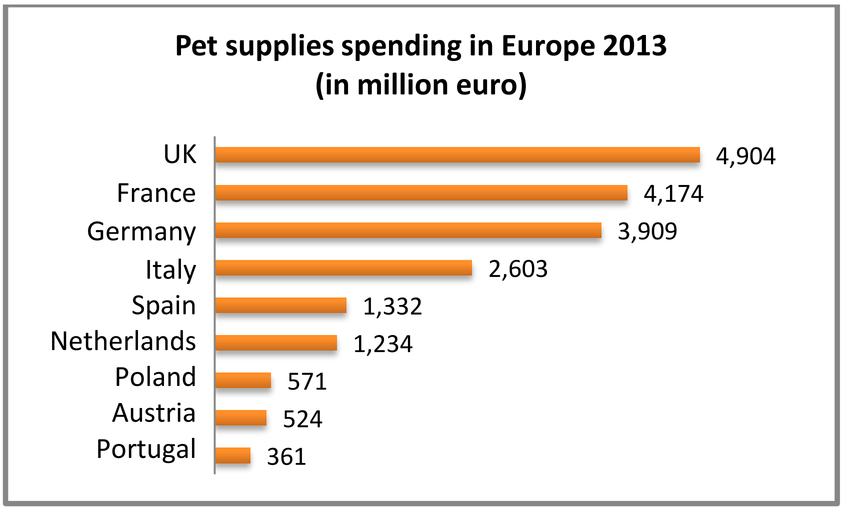
Illustration 9



Source: FEDIAF, Brussels; Facts and Figures 2012; Numbers for Germany: 2013 (IVH/ZZF); Population figures from eurostat; Own computations

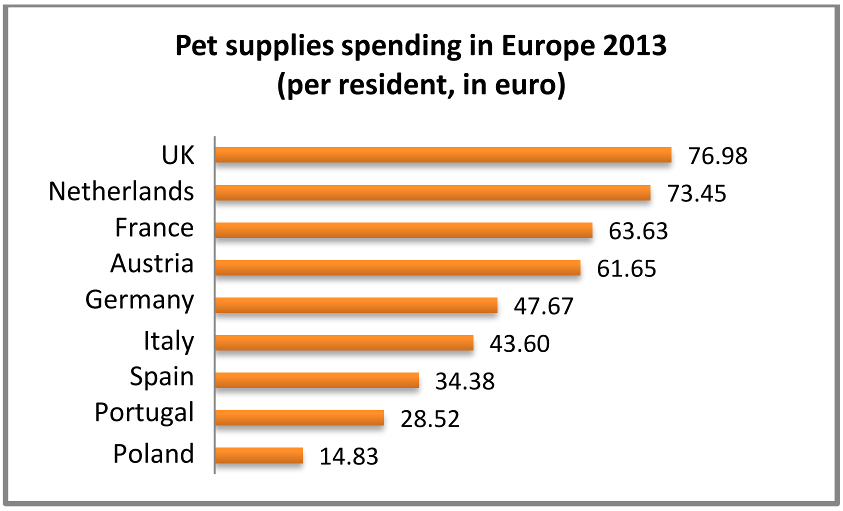
Looking at **expenditures for pet supplies** (food and accessories, bricks & mortar trade) in the countries selected as examples, countries like United Kingdom and France are spending more on pets than Germany, even though they have fewer residents (Ill. 10). Here also, Germany only places in the middle when comparing expenditures in relation to the residents. The per capita expenditure on pets is much higher in countries such as the United Kingdom, the Netherlands, France or Austria (Ill. 11).

Illustration 10



Source: ZZF, Pet market 2013, (http://www.zzf.de/publikationen/marktdaten); Population figures from eurostat; Own computations.

Illustration 11



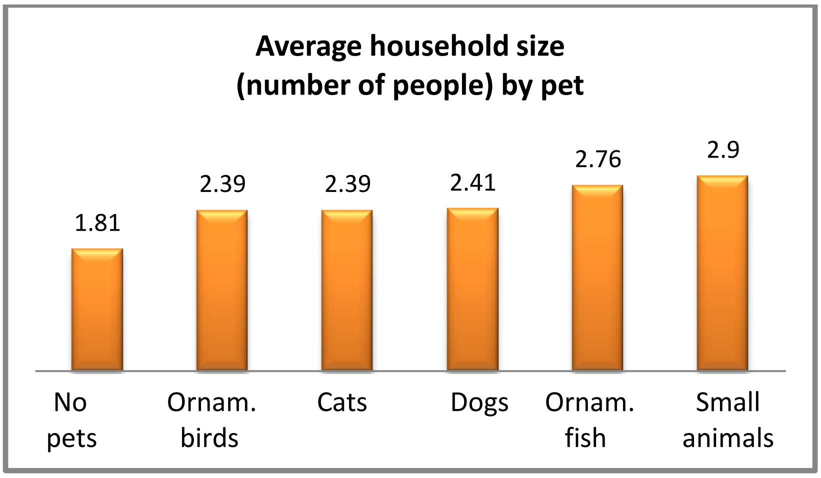
Source: ZZF, Pet market 2013, population figures from eurostat; Own computations.

Calculating the average expenditure per animal, the United Kingdom leads the pack, followed by Austria, France and Germany. But this comparison is not convincing, because much depends on which type of animal (dog, cat, small animal) is preferred in any one country.

C) Pet owner households

The SOEP surveys show, that in terms of size, households with pets are on average larger (more people) than those without animals (Ill. 12). Across all households in Germany, an average of two people live in one household, but only about 1.8 people in households without pets, compared to an average of 2.4 people in households with dogs, cats or birds. The average number of household members is even larger when they keep fish or small animals such as pygmy rabbits or guinea pigs.

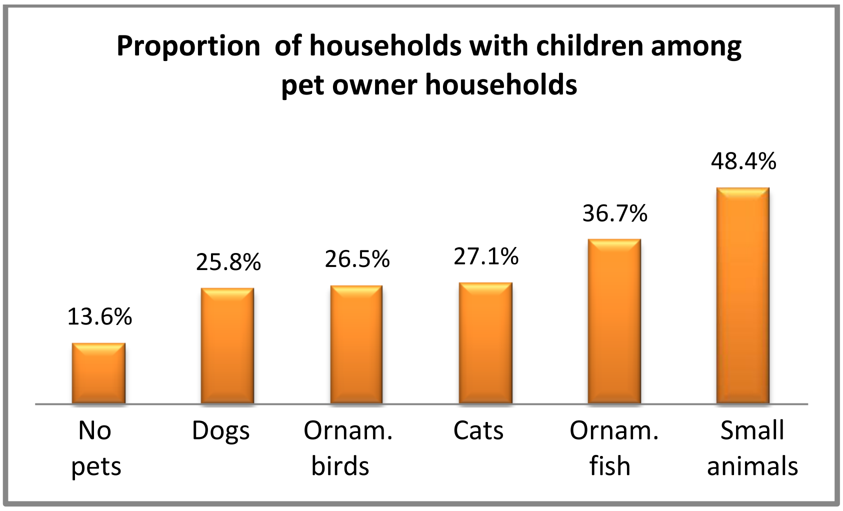
Illustration 12



Source: SOEP, survey in 2011, own computations

This can be explained by the fact that more often pets are owned by households with **children**, and/or that households with pets have a higher than average number of children (Ill. 13).

Illustration 13

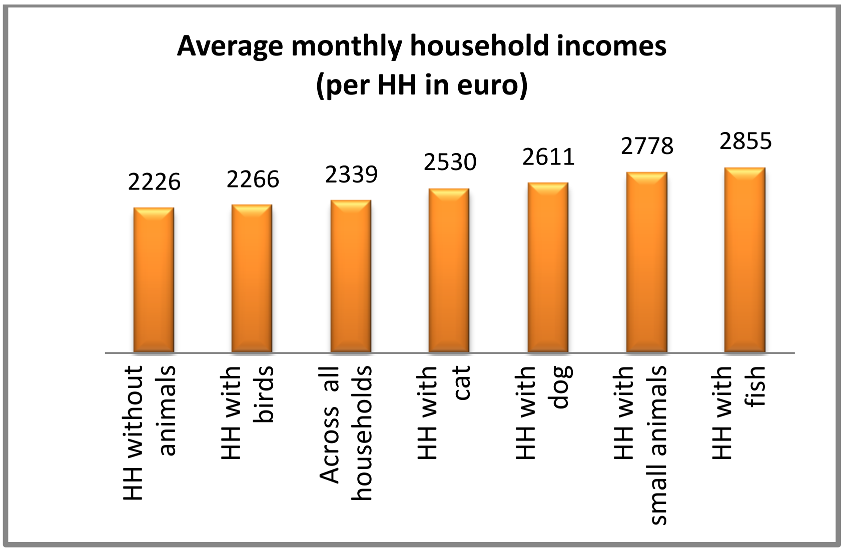


Source: SOEP, survey in 2011, own computations

Thus, nearly 50 percent of all households with small animals also have children, whereas about 14 percent of the households without pets have children. Children live in more than 27 percent of all cat households and close to 26 percent of all dog households.

There are also differences in terms of **household income** (Ill. 14). On average, income is distinctly higher in households with animals vs. families with no animals.

Illustration 14



Source: SOEP, survey in 2011, own computations

The SOEP data also reveals that a higher percentage of pet owners are still leading an **active working life** than non-pet owners. About 50 percent of non-pet owners obtain regular income from gainful employment, whereas one third of this group already draws a pension. In contrast, more than 70 percent of the people keeping fish or small animals are still working, while only 13 and respectively 9 percent of this pet owner group draws a pension. Other pet owners (with dogs, cats, birds) also have an above average labor force participation rate.

The results of the SOEP survey suggest that on average, the non-pet owners tend to consult a physician more frequently (over 2.5 visits within a three-month period) than pet-owners. For people with cats, it was just a little more than 2.1 medical consultations, for people with small animals 2.2, and for dog owners just over 2.3. [6]

However, pets do not necessarily always have positive effects on their owners, but can also become a hazard. This applies in particular to dogs, some of which may be prone to biting because they have not been trained and handled appropriate to their species. The 'costs' resulting from this are difficult to assess, in particular, if an individual has been severely injured or even killed in such a biting attack.

To which extent dangerous biting incidents do occur can only be estimated. Some of the German states (*Bundesländer*) maintain so-called dog-bite statistics (North Rhine-Westphalia, Bavaria, Rhineland-Palatinate, Hesse, Brandenburg, Thuringia, Bremen), but there is no national register. When making a rough projection of the registered incidents in the German states with existing dog-bite statistics, then it can be assumed that people have experienced 4,500 to 5,000 (more or less severe) reported biting injuries per year, and approx. 6,000 to 6,500 incidents resulted in other dogs suffering serious bite wounds. In relation to the total estimated dog population, at most **0.07 percent of the dogs are dangerous to humans**[7] and about **0.1 percent of the dogs constitute a risk for other dogs**.

Since the cause of such incidents is typically not dog ownership as such, but most often due to the irresponsible way some dog owners handle their animal, this should not obstruct our view on the wide range of positive effects that pet ownership has on pet owners and their surroundings, and which also exceed far beyond what is measurable. This is not least because especially sick and handicapped people benefit from dogs. Besides the roundabout 2,200 guide dogs, nowadays an increasing number of therapy dogs are successfully employed in the treatment and care of the mentally ill, dementia patients and children with behavioral disorders; and assistance dogs are trained, for instance, to help handicapped people in mastering everyday life. This is where dogs provide services that in the past have hardly been captured economically in any way or form. This applies similarly to police dogs and rescue dogs (see also Chapter 9).

[6] SOEP, own computations, related to the year 2011. This result is also supported by our own pet owner survey (see Chapter 10), where e.g. more than 30 percent of the dog owners noted that they consulted a physician less often since owning their dog.

[7] The resulting medical and other costs cannot be reliably determined.

D) Animal suffering

Often, poorly treated or neglected pets end up in an **animal shelter** at some point. Moreover, there are animals that are given up for financial reasons. According to a study from 2010[8], an average of 146 dogs, 257 cats, 34 birds and 132 small animals were taken in by every surveyed pet shelter in 2009 (each pet staying an average time of at least 3 months). Extrapolating this with the more than 500 pet shelters affiliated with the *Deutscher Tierschutzbund* (German Animal Welfare Association), then these pet shelters alone took care of **about 75,000 dogs, 130,000 cats, 17,000 birds and 66,000 small animals in 2009** - at least temporarily. Beyond pet shelters, there are many other animal welfare organizations that temporarily take care of animals (in particular dogs and cats) in order to find new homes for them, so it must be assumed that currently **up to 2 percent of our pets** are not living in private homes, but rather **in a pet shelter** or some other pet welfare institution.

Unfortunately, many of our potential pets are also still forced to contribute to the profit of our national economy by a distressing method: They are used as **test animals**. According to an official statistic of the *Bundesministerium für Ernährung und Landwirtschaft*[9] (Federal Ministry for Nutrition and Agriculture) **more than 3 million test animals** were 'wasted' **in 2012**, almost 6 percent more than the previous year! Among them are also many of our pets: **2,612 dogs, 863 cats, nearly 100,000 rabbits** (and by the way, also 1,686 primates!).

In approx. 35 percent of the cases, so-called 'fundamental research' is indicated as the intended purpose. Research involving animals is also used for purposes of 'training and education', for toxicological studies and for 'exploring, developing and testing the quality of products and devices in the medical sector'. The question is whether this suffering of animals is justified by the insights gained from the research. A US study suggests that '92% of all potential medications proven to be effective and safe by method of animal testing do not stand the test of a clinical trial with humans, either due to a lack of efficacy or because of undesirable side effects'.[10] This means that all the animal suffering caused would have been for nothing! Therefore, considering our 'humane' society, it would be more decent to increasingly promote types of research that either forgoes or at least reduces animal testing.

However, in the following chapters we will return to our key topic of **private pet ownership** and its impact on expenditures, turnover and the overall economic effects on our gross domestic product, our jobs and social welfare.

[8] Occupancy and adoption figures of pet shelters affiliated to *Deutscher Tierschutzbund*, a study by the MAFO-Institute as commissioned by *Deutscher Tierschutzbund*, April 2010. Basis for the data is the year 2009.
[9] http://www.bmel.de/DE/Tier/1_Tierschutz/_texte/TierschutzTierforschung.html
[10] *Ärzte gegen Tierversuche e.V.*, *Woran soll man denn sonst testen?* Modern research methods without animal testing, P. 6; http://www.aerzte-gegen-tierversuche.de

Chapter 2:
Pet Supply Turnover (Pet Food & Accessories)

To map the economic relevance of pet ownership, the key spending positions connected to pet ownership must first be captured. This primarily includes the spending or sales figures on pet food and accessories.

The main sales channels for pet supply products are above all in the **bricks-and-mortar trade**: specialized trade, garden and do-it-yourself (DIY) markets, supermarkets and discounters. Sales estimates for the bricks-and-mortar trade are provided by the *Industrieverband Heimtierbedarf* (IVH / Industrial Association of Pet Care Producers).

In addition, mail order businesses, in particular the online trade, are playing a growing role. But there, online sales figures are more difficult to assess. Estimates (IVH, ZZF, Zooplus) assume an online turnover in 2013 of approx. 400 million euro for pet supplies in Germany, which can be allocated to pet food (72%) and accessories (28%), and attributed to dogs (45.5%), cats (45.4%) and other pets (9.1%).[11] Thus, contribution to the online trade is above average among dog owners - in relation to their share of the bricks-and-mortar business (= 38%), and below average among owners of other pets (share of bricks-and-mortar sales = 15%). As such, **pet food** sales can be allocated to the pet species as follows (see Table 1):

Table 1: Pet food (commercial production) in million euro

2013	Bricks-and-mortar (IVH)	Mail-order/ online*	Total
All pets	**2,974**	**288**	**3,262**
• **Dogs**	**1,204**	**131**	**1,335**
• **Cats**	**1,538**	**131**	**1,669**
• **Other pets**	**232**	**26**	**258**
– **Ornamental birds**	**47**	**5**	**52**
– **Ornamental fish**	**61**	**7**	**68**
– **Small animals**	**124**	**14**	**138**

Sources: Bricks-and-mortar trade: IVH; Mail-order business: BVH, IVH, Zooplus and own computations.

*Estimated value of entire mail-order business (most is online trade) based on information from the BVH, IVH, Zooplus and own pet owner survey; Own computations.

[11] Same breakdown as for *Zooplus* online business.

Nowadays, pet food is largely purchased as commercially prepared compound feed. This alone generated turnover (bricks-and-mortar and online) in excess of 3 billion euro (see Table 1). More than half of the amount is spent on cat food and just over 40 percent on dog food. Not quite 10 percent of the turnover goes for feeding other pets.[12]

However, it has to be considered that pets are not exclusively fed commercially prepared pet food, but some pet owners to a certain degree also feed **home-prepared pet food** (e.g. BARF diet[13]). This includes - mainly for dogs - products from the butcher shop and other food specifically purchased for the dog (e.g. noodles, rice, vegetables). As for cats, this clearly plays a minor role. Whereas for birds and small animals (hamsters, rabbits, guinea pigs, etc.), the list is complemented with fruit and vegetables. Fish and terrarium animals often get live food, which to a large extent or sometimes completely replaces commercial pet food.

The results of the Skopos (IVH) survey and our own pet owner poll suggest that - subject to a careful estimate - another approx. 485 million euro may be added for not commercially produced, home-prepared pet food (see Table 2).[15]

Table 2: Home-prepared, not commercially produced pet food (in million euro)	
All pets	**approx. 485**
• **Dogs**	**approx. 330**
• **Cats**	**approx. 80**
• **Other pets**	**approx. 75**
– **Ornamental birds**	**approx. 15**
– **Ornamental fish/ reptiles**	**approx. 15**
– **Small animals**	**approx. 45**

Source: Own estimates based on pet owner survey (see Chapter 10).

[12] The domestic production of pet food exceeds these values, because Germany is exporting (43% of the sales-dedicated production) more than importing (37.4%). However, this will not be explored any further, as this study is only concerned about the turnover affected by pet ownership in Germany, not overseas.

[13] BARF: 'Biologically Appropriate Raw Food'

[14] Crickets, locusts and cockroaches for smaller reptiles. Feed mice, feed rats, day-old chicks for larger reptiles and snakes.

[15] Then the (diet) feed sold by veterinarians and pet clinics must be added, which for this purpose is included in the veterinarian turnover, which is detailed in Chapter 3.

This results in the following estimates for the **total pet food expenditures** in Germany (see Table 3). That means, a total of **close to 3.75 billion euro** is spent on feeding pets in Germany.

Table 3: Total pet food turnover in million euro			
2013	**Commercially prepared**	**Home prepared**	**Total**
All pets	**3,262**	**485**	**3,747**
• **Dogs**	**1,335**	**330**	**1,665**
• **Cats**	**1,669**	**80**	**1,749**
• **Other pets**	**258**	**75**	**333**
– **Ornamental birds**	**52**	**15**	**67**
– **Ornamental fish/ reptiles**	**68**	**15**	**83**
– **Small animals**	**138**	**45**	**183**

Pet accessories are another major area of expenditures.

Table 4: Pet accessories in million euro			
2013	**Bricks-and-mortar (IVH)**	**Mail-order/ online***	**Total**
All pets	**935**	**112**	**1,047**
• **Dogs**	**162**	**51**	**213**
• **Cats**	**433**	**51**	**484**
• **Other pets**	**340**	**10**	**350**
– **Ornamental birds**	**40**	**1**	**41**
– **Ornamental fish/ reptiles**	**195**	**6**	**201**
– **Small animals**	**105**	**3**	**108**

Sources: Bricks-and-mortar trade: IVH; Mail-order business: BVH, IVH, Zooplus and own computations.

*Estimated value of entire mail-order business (most of it online trade) based on information from the BVH, IVH, Zooplus and own pet owner survey; Own computations.

Pet accessory turnover (see Table 4) includes expenditures for baskets, collars, feeding bowls, scratching posts, toys, grooming products, litter/straw/hay, technology (for aquaria), etc., divided into turnover from the bricks-and-mortar business and online trade. The cat accessory turnover is relatively high because it also includes cat litter. Aquaria technology and fittings play a major role in the fish category.

However, there are also **accessories that are not procured through the pet industry**: This includes e.g. car accessories for dog owners, such as special floor mats, kennels, (mesh) dog guards. Above that, some accessories - not specifically intended for dogs, including toys, blankets, pillows, etc. - are purchased in 'regular stores'. In addition, money is spent on things like self-made kennels, dog houses or cages for small animals, on property fences set up especially for a dog, on home repairs/ renovations as a direct result of keeping pets. The relevant sales value for these kinds of expenditures are explored and estimated in Chapter 7 under 'other turnover'. Therefore, this chapter just includes the turnover from what has been 'officially' designated as a pet accessory.

This results in **total pet supply turnover** (bricks-and-mortar and online trade, commercial and home-prepared pet food and pet accessories) of nearly 4.8 billion euro (Table 5):

Table 5: Total pet supply turnover in million euro

2013	Pet food	Accessories	Total
All pets	3,747	1,047	Approx. 4,800
• Dogs	1,665	213	1,878
• Cats	1,749	484	2,233
• Other pets	333	350	683
– Ornamental birds	67	41	108
– Ornamental fish/ reptiles	83	201	284
– Small animals	183	108	291

Just by covering the basic animal needs (food and equipment), pet ownership in Germany generates a turnover of close to 5 billion euro[16], whereas dog ownership accounts for 1.8 billion and cat ownership for 2.25 billion.

[16] This is also compatible with various computations of the National Account Systems (NAS).

Chapter 3:
Animal Health Expenditures

The more that pets enrich the lives of people, the more it raises the awareness not only for the fundamental needs of animals, but also the health and well-being of pets. Veterinary care plays a considerable role in this - also in terms of spending.

Results of the pet owner survey that was part of the population study conducted by IVH/ZZF[17] suggest that 87 percent of dog owners regularly, i.e. at least once per year, consult the veterinarian with their dog (see Table 6). 27 percent even bring their dog to the veterinarian three times per year or more. Veterinary treatment of cats is less frequent: 30 percent of the cats are not taken in for regular checkups, and only 9 percent of cats are treated three times per year or more.

Table 6: Veterinarian consultations per year

2013	Less than 1 time	1 time	2 times	3 times and more
• Dogs	13 %	40 %	20 %	27 %
• Cats	30 %	45 %	16 %	9 %

Source: Population study IVH/ZZF 2014

An online survey of dog and cat owners conducted by the BfT[18] in 2010 showed that of all respondents, dog owners had the highest veterinarian costs with an average of almost 200 euro per year, cat owners with about 122 euro annually. Our own pet owner survey (Chapter 10) revealed slightly lower, but still substantial veterinarian expenditures, whereas most of the interviewed dog owners spent on average 50 to 200 euro per year on veterinarian services (per dog), and most interviewed cat owners said their annual veterinary costs were 30 to 100 euro (per cat).

Therefore, the turnover of small animal veterinarian practices (including pet medication sales), but also the costs for homeopathic vets, nonmedical practitioners or veterinary physiotherapy practices must be included to properly capture the overall economic relevance of pet ownership.

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[17] Skopos(2014)

[18] *Bundesverband für Tiergesundheit e.V. (BfT)* , BfT Special No. 51 / October 2010. Survey that included close to 500 dog owners and little over 500 cat owners.

Currently, there are approx. 9,480 veterinary practices (including clinics) in Germany[19], generating a total turnover (excl. VAT) of approx. 2.577 billion euro (incl. VAT: 3.050 billion euro).[20] Thereby, an average of just above 270,000 euro in turnover (excl. VAT) is generated per veterinary practice. However, about 65 percent of this turnover is spent on personnel costs, expenditures for procured goods and services, plus other business expenses and investments, so that on average the net proceeds account for only approx. 35 percent of the turnover.[21] In addition, there is a relatively wide spectrum between the different veterinary practices: Close to 15 percent generate an annual turnover of just approx. 33,000 euro on average, another 18 percent have an average annual turnover of 74,000 euro. On the other hand, another 11 percent of the veterinary practices show an annual turnover of more than 500,000 euro.[22]

According to the *Bundestierärztekammer* (German Federal Chamber of Veterinarians), in 2013 there are 11,938[23] veterinarians who were self-employed or assisting in a resident practice. Altogether, approx. 38,500 people are working in veterinary practices, of that a little over 73 percent as dependent employees.[24]

The veterinary practices can also be differentiated by purely small animal practices (close to 50 percent of veterinarians), mixed small and large/ farm animal practices (about 40 percent of vets) and purely large/ farm animal practices (about 10 percent of vets).[25]

Pets are treated predominantly in small animal practices, but also in mixed practices for small and large/ farm animals. Here, the percentage of pets can only be estimated. Most likely, the turnover share would be somewhere between 40 and 60 percent.

Therefore, the turnover of small animal veterinarians, and to a certain percentage also the turnover of veterinarians treating small as well as large/ farm animals, are relevant in assessing the economic significance of pets.

Considering the proportion of pets being treated by veterinarians, and the differences in average turnover of small animal practices and large/ farm animal practices[26], a range for the total turnover of veterinarians from pet treatment can be calculated, depending on what percentage of the turnover in mixed veterinary practices (small animals and large/ farm animals) is attributed to pet treatment:

[19] *Statistisches Bundesamt* (Federal Statistical Office), *Fachserie 14, Reihe 8.1* (VAT statistics), 2012, dated 18 March 2014; capturing veterinary practices with an annual turnover of at least 17,500 euro.
[20] *Statistisches Bundesamt, Fachserie 14, Reihe 8.1* (VAT statistics), 2012, dated 18 March 2014, p. 25
[21] *Statistisches Bundesamt, Fachserie 9, Reihe 4.4* (structure of services survey), 2012, dated 23 July 2014, p. 15.
[22] *Statistisches Bundesamt, Fachserie 14, Reihe 8.1* (VAT statistics), 2012, dated 18 March 2014.
[23] See *Deutsches Tierärzteblatt 6/2014* published by *Bundestierärztekammer*. Not included in this consideration are all those veterinarians who work in veterinary administration and in science/ research and in industrial companies. Thus, the number captures all veterinarians working in their own practices and in animal clinics. (However, this also includes veterinarians with a turnover of below 17,500 euro, if applicable.)
[24] *Statistisches Bundesamt, Fachserie 9, Reihe 4.4* (structure of services survey), 2012, dated 23 July 2014, p. 15.
[25] See *Deutsches Tierärzteblatt 6/2014*. Small animal practices provide treatment to all pets we consider e.g. dogs, cats, hamsters, guinea pigs, birds, reptiles, etc.
[26] See *Statistisches Bundesamt* (*Fachserie 2, Reihe 1.6.1, 2007*) dated 2 Sept 2009, pp. 118 .

This results in an estimated turnover of veterinarians (from treating pets) of between 1.8 billion and 2.0 billion euro.[27]

In light of the population data detailed in Chapter 1, this results in **annual veterinary costs of approx. 140 euro per dog** and **just above 60 euro per cat on average** across Germany. This also corresponds with the figures that have resulted from the pet owner survey (Chapter 10) on veterinary expenditures.

Included is the turnover (incl. VAT) from **selling pet medications** of about 500 million euro. Sales of special diet food are estimated at about 90 million euro. A small share of pet medications is also sold directly through pharmacies (approx. 2-3%). Other homeopathic remedies are also frequently purchased in pharmacies when pet owners treat their dog themselves regularly with homeopathic medicine. However, (at this point) this is being done in a dimension that is negligible in terms of the overall economy.

The **turnover from drugs** can be attributed to the individual pet species as follows[28]:

Dogs: approx. 315 million euro, cats: approx. 165 million euro, small animals: approx. 20 million euro.

Estimate of **vet turnover from dogs, cats and other pets**: [29]

Dogs: 52 percent

Cats: 38 percent

Small animals/ birds/ reptiles: 10 percent

After all, there are the **nonmedical practitioners, veterinary physiotherapists and homeopathic vets** who also contribute to pet health, whereas the homeopathic vets most often are veterinarians or nonmedical practitioners with an additional qualification. On the other hand, nonmedical practitioners (most often working homeopathic) and veterinary physiotherapists are considered self-employed professions. Both of these professional fields enjoy a growing popularity, also reflected in the expanding training opportunities.
According to the 'Yellow Pages', Germany has approx. 1,650 nonmedical practitioners and approx. 530 veterinary physiotherapists. However, industry sources say there are a lot more, as this occupation is often carried out as a side business and part-time (with relatively low turnover), and frequently not advertised in the Yellow Pages.

[27] Counter calculations by the national account system rather suggest a tendency towards the upper limit, i.e. about 2 billion euro.

[28] Based on industry information. There is not enough data available for a further breakdown into ornamental birds, ornamental fish and small animals.

[29] Breakdown according to the population figures, and information on the frequency of veterinary consultations per animal species (see Table 1), information from industry sources and from own survey of veterinarians. However, the own survey of veterinarians is not strictly representative due to the limited number of responses.

The average monthly gross salary of a (full-time) nonmedical practitioner is about 2,100 euro. However, there is a very wide range in actual income, which depends on if the job is performed full-time in an own practice or part-time from home.[30] This applies similarly to the veterinary physiotherapist, but who earns a slightly higher average monthly (full-time) income (2,500 euro). Of course, the turnover is a little higher as the income also has to cover rent, if applicable, or travel cost, etc.

Federation sources[31] estimate the number of **nonmedical practitioners** to be approx. 4,500, with an average annual income of approx. 18,000 to 22,000 euro per practice (because only a fraction of these people carry out this profession full-time). This would result in a turnover for nonmedical practitioners of about 90 million euro. However, nonmedical practitioners treat not only pets, but often also horses (approx. 30 percent of the turnover), i.e. **turnover from the treatment of pets** would be **about 60-65 million euro**.

This applies similarly to **veterinary physiotherapists.** Their number is estimated at 2,000 to 3,000 according to industry sources. Assuming slightly higher turnover than nonmedical practitioners, the turnover for this profession can be estimated to be approx. 60-65 million euro, and **approx. 40-45 million euro** of that can be attributed to the **treatment of pets**.

And then there is the turnover of training providers[32] that needs to be added.

Consequently, the pet-relevant turnover of nonmedical practitioners and veterinary physiotherapists can be estimated at about 110 million euro.

Federation sources size up the **nonmedical practitioner/ veterinary physiotherapist** turnover from dogs, cats and other pets as follows:

Dogs: 65 percent

Cats: 30 percent

Other pets: 5 percent

Overall, the turnover of veterinarians (to include medications and diet food) and of nonmedical practitioners and veterinary physiotherapists can be included in the **animal health revenues** (see Table 7).

Table 7: Pet health revenues (in million euro)

[30] http://www.tierheilpraktiker.net/tierheilpraktiker-gehalt.php
[31] Kooperation deutscher Tierheilpraktikerverbände e.V
[32] The costs of seminars and coursesor animal physio-therapist or nonmedical practioner training range between several hundred and several thousand euro.

2013	Veterinarians	Nonmedical practitioners and vet. physiotherapists	Total pet health
All pets	1,800 – 2,000[33]	110	Approx. 2,100
• Dogs	930 – 1040[31]	71	Approx. 1,100
• Cats	690 – 760[31]	33	Approx. 800
• Other pets	180 – 200[31]	6	Approx. 200

Thus, approx. 2.1 billion euro can be realistically considered as the turnover generated from pet health, of that a little more than half can be attributed to dog ownership, more than one third to cat ownership and the remainder to other pets.

[33] Leaning more towards the high end.

Chapter 4:
Turnover from Pet Breeding and Associations

Apart from the revenues gained from food, accessories and health care for pets, the turnover from pet breeding or the commercial pet trade, whatever the case may be, also plays a vital role. This includes not only the turnover from breeders or the commercial pet trade, but also the turnover from pet clubs and associations, as well as the various pet shows and exhibitions aimed at promoting the interest in pet ownership.

A differentiation of the turnover from breeding and trade must be made between 'purebred **dogs**' and 'mixed breeds', and between 'purebreds' and 'common domestic **cats**'. Mixed breeds are sometimes given away for free or a low nominal charge; common house cats are very often this case. Pet owners with small pets such as pygmy rabbits, hamsters and guinea pigs, occasionally also experienced unplanned reproduction, and then the offspring is frequently given away.

A) Dog breeding

For **purebred** puppies, an average sales price of 800 to 1,000 euro (but possibly also a lot more, where indicated) can be assumed[34]. However, the margin of fluctuation is relatively large - this depends less on the size of the dog but rather more on the type of breeder: Does the puppy come from a known controlled breeding line (with bloodline) or from a private hobby breeder or from mass breeding or was it imported? Purebred dogs without a bloodline are often sold for prices far below that of dogs from VDH breeding[35]. Depending on this factor, prices may range from 500 to 3,000 euro. Determining an average price for **mixed-breed puppies** is even more difficult - while some are given away literally for free, others may be sold for several hundred euro.

Assuming a dog population of 6.9 million dogs (see Chapter 1) and an average life expectancy of 11 to 12 years[36], we calculate an **annual offspring of approx. 575,000 to 600,000 new dogs**. However, not all come from Germany. The VDH estimates that about 20 percent are imported. The numerous 'dogs in need', which animal welfare organizations bring to Germany (as puppies or adult dogs) from various south and east European countries must also be included in the calculation. Thus, in the end, only **approx. 450,000 puppies per year** come **from Germany** itself.

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[34] According to breeder surveys and http://www.rassehunde.de/preis/preis.html
[35] VDH: *Verband für das Deutsche Hundewesen* (German kennel club - umbrella organization)
[36] The life expectancy of small dogs can also be 15 to 16 years, for large dogs often only 8 to 10 years. See Cornelia Kraus et. al., The Size-Life Span Trade-off Decomposed: Why Large Dogs Die Young, in: The American Naturalist, Vol. 181, 2013, pp 492 .

Of all the dogs in Germany, approx. 69 percent are purebreds and approx. 31 percent mixed breeds, according to the VDH.[37] Of the more than 4.1 million dogs registered at Tasso[38], about 77.6 percent are identified by their owners as purebreds and 22.4 percent as mixed breeds. Considering this, we assume to have approx. 70 to 75 percent purebred dogs across Germany.[39] Accordingly, **approx. 315,000 to 335,000 purebred puppies are sold by German breeders**, thereof approx. 77,000 originate from controlled VDH breeding[40].

At an average price per purebred dog of 800 to 1,000 euro, the **turnover from selling purebred puppies** amounts to about **250 to 335 million euro**. At an average price per mixed breed of 100 to 300 euro, the **turnover from selling mixed breed puppies** amounts to about **11.5 to 40 million euro**. Unfortunately, many dogs have to change owners during their lifetime, and are often sold for several hundred euro - this would also have to be considered.

Overall, the annual turnover from breeding and acquiring dogs can be estimated at about 300 to 350 million euro.

B) Cat breeding

The common domestic cat clearly dominates the scene. The number of purebred cats is estimated at about only 10 percent of the cat population[41]. More exact information is not available, as breeders of purebred cats do not have a mutual, nationwide umbrella organization, but instead are split up into many - partly only regional - individual associations (e.g. Deutsche Edelkatze e.V., 1. DEKZV e.V., Deutsche Rassekatzen-Union e.V., just to name a few of the larger organizations).

Prices per purebred cat vary between 500 and 1,000 euro: The starting price for Persian kittens is about 400 to 500 euro. The cost for a British Shorthair is between 500 and 750 euro, depending on the color. Norwegian Forest cats are available for about 700 euro. Leopard cats and Sphynx cats go for about 1,000 euro or more.

Assuming a cat population of 11.5 million cats (see Chapter 1) and an average life expectancy of approx. 15 years[42], we estimate an **annual number of new kittens of approx. 750,000 to 800,000**. At 10 percent purebred cats, this would result in approx. 75,000 to 80,000 purebred kittens and thus a **turnover from purebred cat breeders of approx. 55 to 60 million euro**.

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37 VDH Business Report 2012, p. 14
38 TASSO: Organization for the registration and re-adoption of run-away animals (http://www.tasso.net)
39 In our own pet owner survey (see Chapter 10) barely 55 percent of the dogs are identified as purebreds.
40 VDH, puppy statistics
41 Information from industry sources
42 Life expectancy can be up to 20 years for indoor cats, other domestic cats often just live 10 - 15 years.

Common domestic cats are most often (not always) given away either for free (from private) or against a nominal charge (from animal welfare), whereas in the latter case, the cats have already been vaccinated, de-wormed and equipped with a chip. The turnover from pet shelters is captured separately in Chapter 5; therefore we only have to look at the turnover from private sales. If 10 percent of the domestic cats are actually sold (for 30 to 50 euro), this would be approx. 2.5 million euro.

Overall, the annual turnover from breeding and acquiring cats can be estimated at approx. 60 million euro.

C) Breeding and selling of other pets

Ornamental birds & fish, terrarium animals (turtles, bearded dragons, axolotls, geckos, snakes, iguanas, etc.) and small animals (pygmy rabbits, guinea pigs, hamsters, rats, mice, degus, ferrets, etc.) are sourced primarily from pet shops or directly from breeders, but also partly at fairs (e.g. reptiles). Sometimes, the animals also reproduce 'unplanned', and then the offspring are given away. Unfortunately, there is no direct data available, neither on the turnover from live animals in pet shops nor from the breeders or animals traded at fairs. Therefore, the turnover figures must be derived from the population numbers[43].

Pygmy rabbits: To maintain the number of approx. 3 million animals in German households with an average life expectancy of 8 to 12 years each, approx. 250,000 to 300,000 young are needed as offspring. At an average sales price of 30 to 40 euro, this results in an estimated **turnover of 7.5 - 10 million euro**.

Guinea pigs: To maintain the number of approx. 1.3 million animals in German households with an average life expectancy of 6 to 8 years each, approx. 160,000 to 200,000 young animals are needed as offspring. At an average sales price of 15 to 30 euro, this results in an estimated **turnover of 2.5 - 4.5 million euro**.

Hamsters: Considering approx. 0.7 million animals in German households with an average life expectancy of 2 years each, the offspring would add up to approx. 330,000 to 370,000 animals. At an average sales price of 5 to 15 euro, this results in an estimated **turnover of 3.5 - 4 million euro**.

Other small animals (mice, rats, chinchillas, degus, ferrets, etc.): Considering approx. 650,000 **mice and rats** in German households[44] with an average life expectancy of approx. 2 years each, the offspring would - at an average purchase price of 5 to 20 euro - generate a

[43] In accordance with the population study by IVH/ZZF, Skopos 2014

[44] Irrespective of animals purchased, for example, as live food by snake owners. However, this has been included in Chapter 2 'non-commercially prepared pet food'.

turnover of about 3.5 to 4 million euro. Considering approx. 200,000 to 250,000 **chinchillas** in German households with an average life expectancy of up to 15 years each, and average purchase prices of 50 to 100 euro each (however, prices can even exceed 1,000 euro), the **turnover** would amount to **about 1 to 1.5 million euro**. The offspring of approx. 180,000 **degus** (life expectancy of 4 to 6 years and a purchase price of 15 euro on average) would result in a **turnover of 500,000 euro**, while the offspring of the approx. 120,000 **ferrets** (life expectancy of 6 to 10 years and a purchase price of 80 to 200 euro each) would generate **approx. 2 million euro turnover**.

Altogether, the **turnover from selling these small animals** can be estimated **at about 7 to 8 million euro**, while **small animals in total generate about 20 to 25 million euro in sales.**

Ornamental birds: To maintain the number of approx. 3.4 million birds in German households (whereas parakeets and canary birds account for about 85 percent, parrot species 10 to 15 percent) with an average life expectancy of 8 to 15 years for parakeets and canary birds (for parrots 25 to 80 years) each, approx. 300,000 to 350,000 birds are needed as offspring. However, every year about 1 million foot rings are issued.[45] Even though too many rings are ordered in most cases, it could also suggest that the offspring may even add up to 500,000 - 600,000 young birds. With an average purchase price of 15 to 30 euro (parrots: 500 to 1000 euro), trading ornamental birds results in an estimated turnover **of 10 - 20 million euro**.

Ornamental fish: To maintain the number of approx. 2 million aquariums and 1.7 million garden ponds with each 10 to 20 fish on average per aquarium/pond, plus an average life expectancy of the fish of 1 to 20 years, at least 10 to 15 million fish (or even more) are needed annually as offspring. At an average purchase price of 1 to 25 euro (with obvious exceptions to the high end for certain fish), selling ornamental fish results in an estimated turnover **of approx. 50 to 100 million euro**.

Terrarium animals: Considering approx. 800,000 million terrarium animals and an average number of 1 to 2 animals per terrarium, plus an average life expectancy of 10 to 15 years each (longer for turtles), an offspring of approx. 100,000 animals would be needed. At an average purchase price of 50 to 300 euro for turtles and 30 to 100 euro, for example for corn snakes, geckos, iguanas (with obvious exceptions to the top for specific animals), selling terrarium animals results in an estimated turnover of **approx. 10 million euro**.

Overall, the annual turnover from breeding and selling other pets can be estimated at approx. 100 to 150 million euro.

[45] Information by *Deutscher Kanarien- und Vogelzüchter-Bund e.V.* (German Canary & Bird Breeder Association)

Table 8: Turnover from pet breeding and selling (in million euro)	
2013	
All pets	**460 – 560**
• **Dogs**	**300 – 350**
• **Cats**	**60**
• **Other pets**	**100 – 150**
– Ornamental birds	**10 – 20**
– Ornamental fish	**50 – 100**
– Terrarium animals	**10**
– Small animals	**20 – 25**

Thus, **about 500 million euro** can be realistically considered as the **turnover generated from pet breeding and selling**, of that more than 60 percent can be attributed to dog ownership, close to 15 percent to cat ownership and just under 25 percent to other pets.

D) Clubs and associations

Club and association activities are most distinct in **dog breeding**. The ***Verband für das Deutsche Hundewesen*** (VDH) is the umbrella organization with 175 local member clubs and represents approx. 650,000 members (including members of the JGHV - the hunting dog association). The latest turnover of the VDH is **about 5.5 million euro**, but about half was generated from holding three large international exhibitions (German National Champion Show, VDH European Champion Show - both in Dortmund - and the International Dog Show in Leipzig). These revenues are captured directly in the fairs' turnover. Membership fees in the individual **purebred dog clubs** of the dog association is somewhere between 40 and 60 euro per year. Considering 650,000 members, this adds up to an estimated turnover from association activities of at least **approx. 35 million euro**.

With respect to cats, clubs and associations play a minor role, as there are clearly more purebred dogs than purebred cats. Also, there is no overarching umbrella association. To a large extent, it is only the breeders who are organized in cat clubs, not cat owners.[46] Cat associations and clubs with the strongest and most active membership are: DEKZV (*Der Erste Deutsche Edelkatzenzüchterverband*) (with approx. 300 members according to their own sources), DRU (*Deutsche Rassekatzen Union*) and DE (*Deutsche Edelkatze*) (300 members); in addition, there are more than 70 smaller, mostly regional clubs. Membership dues are on average 25-50 euro in smaller clubs and associations, and 60 to 95 euro in larger ones. Assuming approx. 15,000 professional purebred cat breeders[47] and that most of them are affiliated with a club/association, the overall turnover from the club activity of cat breeders can be estimated at about **600,000 euro**.

With **small animals**, the club/ association culture is not that developed, and as such, a turnover relevant for the overall economy is difficult to assess. Nevertheless, there are a great many rabbit breeder clubs (approx. 5,000), yet the purebred rabbits bred there and presented in many competitions and exhibitions are not considered pets, but rather farm animals (which by the way are held in pens and not in the house). They are not to be mistaken with pygmy rabbits, which are kept as pets.

In the areas of **aquaristics and terraristics**, it again looks differently. The **VDA** (***Verband Deutscher Vereine für Aquaria- und Terrarienkunde***) is world-wide the oldest and largest association for friends of aquaria and terrariums. Approx. 400 clubs in Germany with roundabout 17,000 members are affiliated with the VDA. Above that, there are approx. 100 additional clubs. Membership dues differ between the clubs/ associations, and are on average from 25 to 60 euro. Thus, club membership in aquaristics/ terraristics generates a turnover of **approx. 800,000 euro**.

Of the roughly 40,000 breeders of **ornamental birds**, about 30,000 are organized nationwide in clubs and associations. The largest umbrella association, the German Canary and Bird Breeding Federation supports approx. 8,000 breeders through statewide organizations and their local clubs.[48] Other larger associations are e.g. the DSV e.V. (German Budgerigar Breeders Association) and the AZ e.V. (Society for the Species Protection, Bird Ownership and Bird Breeding), a registered association. With membership dues of 30 to 40 euro on average, the turnover from club memberships can be estimated at approx. 1 million euro.

Thus, **approx. 37.5 million euro** in turnover is generated from
pet club/ association memberships.

[46] This is different to dog clubs, where members also include many 'regular' dog owners getting together for dog training/ exercises.
[47] According to information from the industry (not all are active)
[48] Information by *Deutscher Kanarien- und Vogelzüchter-Bund e.V.*

E) Exhibitions and fairs

Pet breeders and providers of pet supplies frequently present themselves at exhibitions, shows and fairs to raise interest in their animals and products. There are large events with up to 50,000 visitors, but also numerous smaller shows and exhibitions, which often have just a few hundred visitors. Admission fees for visitors range on average - depending on the magnitude of the event - from 5 to 12 euro (Interzoo: € 20) per day.

Here, we will capture only the turnover from the admission fees that visitors pay to gain entry to exhibitions, shows and fairs. Stand fees paid by the exhibitors and registration fees for the breeders are not included, as ultimately we are concerned about the expenditures/ spending of pet owners as 'end consumers'. Stand fees and registration fees being expenses/ costs incurred by pet supply providers and breeders respectively, will ultimately be included in the turnover of end consumers through product prices.

Only a rough estimate can be made of the turnover from pet supply items sold at the exhibition stands. They cannot be captured directly, but (according to industry information) account for approx. 20 to 30 percent of the proceeds at shows: Most visitors don't buy anything, but rather gain ideas/ incentives or obtain free samples; those buying directly at the exhibition stand rarely spend more than 20 to 50 euro.

The largest exhibitions, shows and fairs featuring several pet species, include:

- *Heimtiermesse Hannover* (about 100,000 visitors)
- *Hund & Katz* in Dortmund (up to 50,000 visitors)
- *Tierisch gut Haustiermesse* in Karlsruhe (approx. 40,000 visitors)
- *Hund & Katz* in Leipzig (approx. 37,000 visitors)
- *Animal* in Stuttgart (approx. 30,000 visitors)
- *Bremen tierisch* (approx. 20,000 visitors)
- *Mein Tier* in Oldenburg (approx. 20,000 visitors)
- *Tier & Natur* in Rostock (approx. 18,000 visitors)
- *Hanse Tier* in Hamburg (approx. 16,500 visitors)
- *Heimtiermesse* in Dresden (approx. 15,000 visitors)
- *Tierwelt* in Magdeburg (approx. 14,000 visitors)
- *Heimtiermesse* in Berlin (approx. 13,000 visitors)
- *Maintier* in Frankfurt (approx. 12,000 visitors)
- *Heimtiermesse* in München (approx. 8,700 visitors)
- *Hund & Heimtier* in Siegen (approx. 6,000 visitors)
- *Erlebniswelt Heimtiere* (part of *Grüne Woche*, Berlin) (*Grüne Woche* had approx. 400,000 visitors, but the pet exhibition area accounted for only 5% of the exhibition area)

From the number of visitors and the relevant admission fees paid at the **exhibitions and fairs**, a turnover of about 3.6 million euro can be projected. The expenditures of visitors are estimated at approx. 5 million euro, including sales at the exhibition stands. Attributed to the individual pets, it looks like this:

Dogs: 3.5 million euro   Cats: 1 million euro   Other pets: 500,000 euro.

In addition, there are also **specific exhibitions/ shows for individual animal species**.

With respect to **dogs**, there are - apart from the large shows integrated in the mentioned pet exhibitions in Dortmund and Leipzig - at least 12 other large dog shows nationwide with 15,000 to 25,000 visitors each, in addition to "*Hund & Pferd*" (Dog & Horse) in Dortmund (70,000 visitors). Above that, the VDH alone has more than 250 special purebred dog shows listed, and many others, such as *"Doglive"* in Münster (15,000 visitors) and "*Die Hundemesse*", a dog exhibition taking place at 7 different locations. This generates a turnover from admissions fees and purchases at exhibition stands estimated at another approx. **5 million euro**.

Large cat events include the World Cat Show in Dortmund, the "*SaxCat*" (international cat show) in Chemnitz, the International Cat Show in Erfurt and the World Cat Exhibition in Oldenburg. Admission fees are from 5 to 7 euro, the numbers of visitors range from 1,000 to 10,000. The largest association, the First German Cat Breeder Association (*1.DEKZV*) organizes an average of 17 international purebred cat shows every year, where (according to association sources) several thousand visitors are not an exception.[49] Moreover, there are approx. 80 to 100 other regional exhibitions organized by the numerous smaller clubs and associations. The visitor count at these events is more like 200 to 300. This generates a turnover from admissions fees and purchases at exhibition stands estimated at **approx. 500,000 to 600,000 euro**.

As for the other pets, significant are especially exhibitions and/or **aquaristics and terraristics trade fairs**. Among the larger events are: *Aqua-Fisch* in Friedrichshafen (21,000 visitors), *Fisch und Reptil* in Sindelfingen (17,000 visitors), *Aquaristiktage* in Ulm (10,000 visitors), *Terraristika* in Hamm (four times a year with over four thousand visitors), *Terraristikmesse* in Karlsruhe, *Angeln und Aquaristik* in Freiburg (over 40,000 visitors), *Interkoi* in Kalkar (more than 1,000 visitors), *Aqua-Expo-Tage* in Dortmund-Wambel (5,000 visitors), *Reptilienbörse* in Bremen. Admission fees are on average from 8 to 12 euro.

In addition, there are over 100 regionally oriented aquaristics and reptile trade fairs with sometimes 500 to 1,000 visitors and admission fees from 5 to 9 euro (ornamental fish fairs have fewer visitors and either charge no entry fee or only 1 to 2 euro). As for these fairs, we only count the turnover from admission fees, as the turnover from animals acquired at these fairs is already captured in the category 'Pet Breeding & Selling'.

The turnover generated from admission fees and purchases at exhibition stands at aquaristics/ terraristics fairs can be estimated at **approx. 1.2 million euro**.

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[49] http://www.dekzv.de/DEKZV.htm

As for **ornamental birds**, there are not that many large exhibitions. Ornamental birds are presented at the European Show at Leipzig (over 40,000 visitors), in addition to poultry, pigeons, rabbits, so that the turnover attributed to ornamental birds is limited. Moreover, there is a series of exhibitions, fairs and shows such as the canary breeder show in Bad Salzuflen or the bird fair in Thüringen, but above all, some regionally limited smaller shows. Admission fees for the latter are often only just 1 or 2 euro, or sometimes the entry is free of charge. This generates an overall turnover from admissions fees and purchases at exhibition stands estimated at **20,000 to 30,000 euro**.

Thus, **approx. 12 to 12.5 million euro** in turnover is generated from pet-related **shows, fairs and exhibitions**.

Table 9: Pet Breeding and Associations (in million euro)

2013	Pet breeding and trading	Association & club activities, incl. shows, fairs, etc.	Total
All pets	460 – 560	about 50	510 – 610
• Dogs	300 – 350	43.5	350 – 390
• Cats	60	2.2	60 – 65
• Other pets	100 – 150	4.2	105 – 155
– Ornamental birds	10 – 20	1.0	10 – 20
– Ornamental fish	50 – 100	1.2	50 – 100
– Terrarium animals	10	1.2	10 – 11
– Small animals	20 – 25	0.8	20 – 25

Thus, approx. 560 million euro in turnover generated in the context of pet breeding and club/ association activities can be assumed as realistic, whereas almost 70 percent are attributed to dog ownership, more than 10 percent to cat ownership and over 20 percent to other pets.

Chapter 5:
Turnover from Services for Pets

A) Pet insurance

All pet owners in Germany are responsible for their pets. The pet owner must be able to control the pet's behavior to neither pester, harass nor harm any other person. This also means pet owners are liable for any damages incurred by their pets, if applicable[50]. A liability insurance policy can protect the owner from those types of financial risks.

Damages incurred by cats, birds or other small animals are, in most cases, covered by the personal liability insurance policy. However, **owners of pets or farm animals** such as horses, sheep, cows or dogs as well have to take out a separate **liability insurance** if necessary. In the German states of Niedersachsen, Thüringen, Sachsen-Anhalt, Berlin, Brandenburg and Hamburg, this kind of pet owner liability insurance for dogs is mandatory; in the other German states, it is only required when owning so-called 'dangerous dogs'. Meanwhile however, many dog owners 'voluntarily' take out extra liability insurance. (95 percent of respondents in the own pet owner survey indicated they are covered by such insurance. But as many of the respondents were from Niedersachsen where it is mandatory, this slightly distorts the national picture.)

For many insurance companies, **dog owner liability** accounts for 6.5 to 7 percent of the premium income in the category of personal liability, according to industry information[51]. In the new German states, the tendency to take out dog owner liability insurance is slightly lower than in the old states in the west (*Bundesländer*). Across the nation, personal liability generated a premium income of approx. 7.223 billion euro[52] in 2013. Taking only 5 percent of that into account (instead of 6.5 to 7 percent), as not all insurances are equally active in dog insurances), this would amount to **roundabout 360 million euro**. Considering an average annual insurance premium of 70-75 euro per (regular) dog[53] (this is more expensive for dangerous dogs - subject to mandatory liability insurance almost everywhere), this would mean that about 4.5 to 4.6 million dogs are covered by liability insurance. This would correspond to 65 percent of all dogs.

<u>Perspective:</u> The turnover in this area is most likely to increase in the future, considering that the number of *Bundesländer* regulating dog owner liability by law is also increasing.

[50] Liability, § 833 BGB (German Civil Code), pet owner liability
[51] Survey of various insurance companies
[52] *Gesamtverband der Deutschen Versicherungswirtschaft e.V.* (GDV / umbrella organization for private insurers in Germany), Statistical Yearbook 2014
[53] The range of annual premiums for normal dogs is between 50 and 130 euro.

Almost every insurance company offers liability insurance for pets or farm animals, and meanwhile in addition even sell **animal health insurance**. However, this is currently being done by only four insurance companies (Agila, Allianz, Helvitia and Uelzener). **Pet health insurance** can be taken out for both dogs and cats (and also horses). The tariff for cats is on average 50-60 percent of the dog tariff. In addition, there is also special hunting dog (accident) insurance, and the health of working dogs can also be insured.

Existing estimates on the full scope of health insurance for dogs and cats are very contradictory nationwide. Throughout the industry, it is often assumed that currently the health of up to 5 percent of the dogs[54] and up to one percent of the cats is insured - however, for both species, over 90 percent of owners have only taken out the less expensive surgery policy.

Considering this and average monthly premiums of 34 to 65 euro (= approx. 400 to 780 euro per year on average) for full health coverage, or 9 to 30 euro per month (= approx. 110 to 360 euro per year on average) for a surgery insurance for dogs (cheaper tariffs have a deductible), total turnover from **dog health insurance** policies can be estimated at approx. **75 million euro**.

Considering the slightly lower premiums for cats (and 1 percent of an estimated 11.5 million cats), the total turnover from **cat health insurance** would be approx. **12 million euro**.

<u>Perspective:</u> Generally, it is expected that the turnover from animal health insurance will also go up, as market penetration in some other countries (e.g. in Sweden, United Kingdom, Norway) is a lot higher than here in Germany.[55]

Finally, there is also **public liability insurance** for dog obedience schools, animal boarding facilities and pet shelters. The annual premium for an animal boarding facility with up to 10 animals can be more than 300 euro. But these payments are implicitly included in the turnover of dog obedience schools, animal boarding facilities and pet shelters.

**Therefore, a total of about 450 million euro can be estimated for both dog owner liability insurance and pet health insurance together,
whereas 95 percent is to be attributed to dog ownership.**

[54] In our own pet owner survey (see Chapter 10), an even larger proportion of respondents had taken out a pet health insurance, however the group of highly engaged pet owners and pet owners from urban areas were over represented .

[55] Study of *R + V Versicherung*: http://www.munichre.com/de/reinsurance/magazine/topics-online/2013/09/pet-insurance/index.html.

B) Animal boarding facilities

Pet owners are not always able to care for their pets around the clock. Especially when traveling for private or business purposes, attending large family gatherings or even in case of an illness, long-term care of a pet by others can become necessary. Sometimes relatives or friends can help out, but that is not always the case. This is when professional pet care is required. The same applies when dog owners are working or employed away from home and do not want to regularly leave their dog alone for too many hours in one stretch.

Meanwhile a growing pet-care market has evolved, offering a wide variety of services in various price and quality categories. Most prominent is dog care, but often cats and other pets are also being taken to animal boarding facilities during a longer-term absence of their owner.

There is not yet any exact data available on the number of **animal boarding facilities and dog day-care centers**. The Yellow Pages list more than 2,000 animal boarding facilities[56] and almost 300 boarding facilities only for cats. Every larger city has one or several dog day-care centers, thus one can assume there are at least 150 to 200 across the nation.

There is very high fluctuation in capacity and utilization, depending on the individual boarding facilities[57] and the season. For dog day-care centers, on the other hand, the season is not a factor.

The daily rate for dogs varies from 12 to 25 euro, i.e. on average approx. 15 to 18 euro. For cats, this is more like 10 to 12 euro, and 5 to 6 euro for small animals. The prices in so-called '*Pfötchenhotels*', ('fancy' hotels) prices are two to three times as high. As for the dog day-care centers (with 3 to 5 dogs on average), prices are on average 20 to 25 euro per day.

Considering an average capacity of 12 dogs and 5 cats, some small animals and an average utilization of 40 to 50 percent, this would amount to a **turnover from dogs in animal boarding facilities** of at least **50 million euro**, from cats about **9 million euro** and from **small animals less than 1 million euro**. Besides, there are **dog day-care centers** (with an average of presumably 3 to 5 dogs each) with a turnover of about **4 to 5 million euro**. These amounts could be much higher should the average utilization increase.

Therefore, a total of about 65 to 70 million euro could be estimated for animal boarding facilities (incl. pet hotels) and dog day-care centers together, whereas over 80 percent is to be attributed to dog ownership.

[56] Including pet hotels.

[57] There are many small-animal boarding facilities with a capacity of approx. 5 to 10 dogs, and some larger pet hotels that can take in 20 to 30 dogs, of course in addition to cats and other small animals.

C) Animal funerals

Considering the population data previously used and the average life expectancy of dogs and cats, approx. 575,000 to 600,000 dogs and 750,000 to 800,000 cats die in Germany every year.[58] This also corresponds to information on the Internet portal: www.bestattungen.de. According to this website, about 1.4 million dogs and cats die in Germany every year.[59]

Most of the dogs and cats are put down by the veterinarian at some point. Often, the pet bodies are also disposed of by the veterinarian. The cost for disposal in rendering plants ranges between 10 to 30 euro per animal (depending on size/ weight). If this is done through the veterinarian, the cost is covered by the turnover figures of veterinarians.

But many owners also want to have their dog or cat buried. This is done partly in the garden (often for dogs), in the forest or on an open field (rather more for cats), or through **specialized funeral homes** - on pet cemeteries and crematories. The funeral types available for pets are meanwhile similar to those for people (nowadays, nature funerals, green burials in a memory park or even ashes-to-diamond funerals are possible). Today, Germany has (according to the Yellow Pages) more than 300 pet funeral homes and (according to the industry) approx. 150 to 180 pet cemeteries. The number of pet crematoria has risen from two in the year 2000 to now 22. This is because **cremation** is now the preferred option, i.e. at least for the 80 percent of all pet owners hiring a professional pet funeral home director.

How many of the deceased dogs and cats are actually cremated and/or buried in a pet cemetery can only be estimated, but it is becoming a fast growing trend. About 160,000 pet burials per year (including burials and cremations) is a figure currently circulating within the sector. According to industry information[60], animal burials consist of approx. 65 percent dogs, 30 percent cats and max. 5 percent small animals. Taking the figure of approx. 160,000 animal burials, this can be broken down to around 100,000 dog burials (= more than 15 percent of all deceased dogs), approx. 50,000 cat funerals (= about 6 percent of all deceased cats) and up to 10,000 small animal funerals (which seems slightly too high).

The cost for an animal cremation is - depending on the animal's size - on average approx. 250 to 300 euro for an individual cremation including the urn, but cheaper for a collective cremation. Considering approx. 130,000 cremations (= 80 percent of funerals), we can assume a turnover of **more than 30 million euro**. The cost for funerals on animal cemeteries (= 20 percent of funerals) is (for dog or cat) on average 300 to 400 euro (incl. plot lease for 3 to 5 years). This would result in a turnover of **approx. 10 million euro**.

Because dogs make up the bigger part of funerals, while also larger and thereby more expensive than cats, which in turn are more expensive to bury than small animals, allocation of the **total turnover of 40 million euro** would look like this: Dogs with more than 70

[58] See also Chapter 4 for dog and cat offspring.
[59] *http://www.bestattungen.de/wissenswertes/nachrichten.html?start=50*
[60] Bundesverband Tierbestatter (German Association for Pet Funeral Homes)

percent (= approx. 29 million euro), cat with more than 25 percent (= approx. 10 million euro), small animals with 1 to 5 percent (= approx. 1 million euro).

This means a turnover of approx. 40 million euro is estimated, largely composed of dogs (29 million euro) and cats (10 million euro).

D) Dog obedience schools

Other pet-oriented services are available, in particular for dogs. Here, specifically dog obedience schools, whose significance has been growing due to the various specifications and requirements as prescribed by the different dog ordinances[61]. As such, these schools represent a growing market. But nowadays, even the 'average' dog owner in most cases[62] has completed a course at a dog obedience school or with a dog trainer at least once during the life of his/her dog.

Currently, more than 2,300 dog obedience schools[63] are organized in various associations. The largest ones include the BHV (*Berufsverband der HundererzieherInnen* / Professional Asociation of Dog Trainers) with almost 250 official members and the IBH (International Professional Dog Trainer Association) with approx. 120 members, and the IG (*Interessengemeinschaft Unabhängiger Hundeschulen e.V.* / Interest Group of Independent Dog Obedience Schools).

Fees for dog training - not including special training as guard dog, therapy dog or guide dog (for the blind) - are approx. 100 to 150 euro per person/ dog in a (group) course, to include 8 to 10 instruction hours at 45 or 60 minutes each. Individual training is a lot more expensive: 30 to 50 euro for every 45 or 60 minutes of instruction on average. 'Licensed dog obedience schools', e.g. 'Rütter Dogs', are also more expensive. Finally, larger dog obedience schools frequently also offer day or weekend seminars on specific behavior-related topics, charging on average about 100 euro per day.

Many dog owners after booking the first course, often continue the training with advanced courses, preparation courses for companion dogs, agility courses or similar. Dogs with aggressive behavior issues often need several months of intense training, which in the end can also add up to several hundred euro. Then there is training to become a guide dog (for the blind) or assistance dog (the former costing approx. 25,000 euro).

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[61] In the State of Niedersachsen, for example, first-time dog owners have to provide proof of competence, which can be gained by attesting participation in a companion dog obedience test (BH exam). So-called 'dangerous dogs' can also reduce the constraints by successfully completing such a test. For this purpose, usually one or several courses or else individual training is booked with a dog trainer.

[62] In our pet owner survey, that included approx. 25 percent of the responding dog owners.

[63] Above that, there are a number of unofficial dog trainers who are not necessarily commercially registered.

One can assume that at least 20 to 25 percent of all dogs have completed a course at a dog obedience school or with a dog trainer at least once in their dog lives. Most of them have even participated in several different courses or enjoyed individual training. That means approx. 150,000 dogs visit dog obedience schools every year.

The spectrum of what dog owners are willing to spend on training hours is very wide - with amounts ranging from 100 to 1,000 euro per dog. Assuming an average total per dog of 500 euro (also taking into account the special training costs of guide dogs (for the blind) and assistance dogs, rescue dogs and therapy dogs) this would amount to an **annual turnover of approx. 75 million euro**.

To a certain degree, this is also compatible with the total number of dog obedience schools, considering that many of them are 'one-person operations', frequently working only part-time and often selling other services on the side, or working with dog day-care centers and/or dog-sitter services (which in terms of turnover has been captured in other places).

Thus, a turnover of approx. 75 million euro could be assumed for dog obedience schools.

E) Pet groomers

First and foremost, dog groomers are active in two areas. On the one hand, they offer trimming and the professional care of coat, skin and nails. On the other hand, they can adjust the visual appearance of a pet to conform to the typical breed standards (e.g. the schnauzer). However, there is no regulated training for doing the job of a dog groomer in Germany, i.e. the job title is not protected. Accordingly, there are also various associations that represent the interests of this group, such as the *Bundesverband der Groomer (*Federal Association of Groomers), the *Bundesverband Deutscher Groomer* (Professional Association of German Groomers) or the professional unit responsible for pet care at the *ZZF* (German Pet Trade & Industry Association).

Here too, it is generally quite difficult to obtain exact figures. The number of registered dog groomers is estimated at far above 3,000, many of them doing it as a side job and/or working only a few hours per week, whereas others have proper dog salons. According to different homepages, the average price for a single dog grooming session amounts to about

42 euro[64]. However, there is also a shadow economy active in this business, where cutting and trimming are frequently offered cheaper and cash-in-hand.

At least 10 to 15 percent of dogs (including poodles, terriers and schnauzers, in addition to their not so pure-bred offspring) should be getting a trim regularly (two to four times per year). Even though not all dog owners take their dogs regularly to get the needed dog care, it can be realistically assumed that an average of approx. 100 euro per year is spent on dog grooming for at least approx. 500,000 to 600,000 dogs. This would correspond to an **annual turnover of dog groomers of 50 to 60 million euro**. This would imply an average turnover per dog groomer of below 20,000 euro. But there is very wide range, i.e. while professional dog salons may earn 50,000 euro and more in turnover, a large group is working part-time and doing this job on the side, and generating turnover in many cases below 10,000 euro.

Also considered must be the turnover generated from **dog groomer training** (individual seminars and courses are offered at a cost of 300 to 1,000 euro). Many consider the profession of animal groomer to be a practical and flexible side business, so demand for these courses and seminars is relatively high, even though the outlook of actually working as an animal groomer is often not likely to be successful. This is also why there is high fluctuation in this business.

Thus, a total turnover (incl. the turnover from animal groomer training) of approx. 65 million euro could be determined for dog groomers.

[64] See *http://www.ausbildung-hundefriseur.com/einkommen-gehalt/*

F) Total services for pets

Adding up revenues from pet insurance, animal boarding facilities, pet funerals, dog training schools and pet groomers, results in a total turnover from services for pets of approx. 700 million euro, almost 95 percent of which is to be attributed to dog ownership (see Table 10).

Table 10: Turnover from services for Pets in million euro

2013	Animal insurances	Animal boarding facilities	Pet funerals	Dog schools	Pet groomers	Total (rounded off)
All pets	450	65 – 70	40	75	65	Approx. 700
Dogs	435 – 440	55 – 60	29	75	65	665
Cats	12 – 15	9 – 10	10	*	*	35
Other pets	*	1	1	*	*	2

* Not possible to investigatle, clearly attributable or relevant for the economy as a whole

Chapter 6:
Other Turnover in Connection with Pets

A) Pets in the media (books, magazines, television)

Even though the book business in general has somewhat stagnated in recent years, **books on pet topics** still sell rather well. Together, the key publishers for pet books (Natur und Tier, Kosmos, Cadmos, Eugen Ulmer, Kynos, Gräfe und Unzer, Minerva, Rüschlikon, Oertel und Spörer) alone have a range of 1,600 titles on offer. All in all, it must be at least **2,000 titles or more**.

Under consideration of average number of copies printed, average sales figures per year and average prices, the turnover from books on pet topics of **around 75 million euro** is estimated. This value is also supported by data from the German Publishers and Booksellers Association on the allocation of German book market turnover by category.[65] For the most part, the relevant book titles can be found in the category 'Guidebook', either in the sub-category 'Nature' or 'Hobby and Home'. But partly, they have also been assigned to children's books.

Book turnover can be roughly attributed as follows:

39 million euro to dog ownership
8 million euro to cat ownership
3 million euro to ornamental bird ownership
9 million euro to aquaristics
10 million euro to terraristics
6 million euro to small animal ownership

Besides books, **pet magazines** constitute a significant share of consumer publications. Most often, they are designated to specific animal species, but some also cover cross-animal topics. Based on magazine prices and, where available, number of copies of the close to 40 most important pet magazines, the turnover from pet magazines of **about 35 million euro** can be documented. Above that, there are also a lot of other small niche magazines, so that the turnover in this category could probably be raised to **about 40 million euro**.

[65] *Deutscher Börsenverein, 'Buch und Buchhandel in Zahlen 2014', http://www.boersenverein.de/de/182716.*

Magazine turnover can be roughly attributed as follows:

20 to 22 million euro to dog ownership
7 to 8 million euro to cat ownership
1 million euro to ornamental bird ownership
2.5 to 3 million euro to aquaristics
2.5 to 3 million euro to terraristics
2 to 3 million euro to small animal ownership

In addition, well-known **'dog experts'** are able to fill large event centers in Germany with a **live program**: 70 - 80 performances per year with on average 3,500 visitors per event, and admission fees of 30 to 35 euro per head can generate turnover of at least **8 million euro** (apart from other consumer spending at these events).

Finally, there are also a number of established **television shows** covering pet topics (e.g. *HundKatzeMaus, der Hunde-Profi, Tiere suchen ein Zuhause, tierisch tierisch, Menschen, Tiere & Doktoren, Der Hundeflüsterer, Zeit für Tiere, Die große Tiershow…*). However, estimating what the turnover could be is rather difficult. Many shows are broadcast weekly, some several times a week, some (large) shows only once, and while some are on public television, others can be seen on independent television channels. Altogether, a minimum turnover of **10 to 12 million euro** can be assumed. Here, dog shows dominate the scene, so that about 70% of the turnover can be attributed to dog ownership, 20% to cat ownership and approx. 10% to the ownership of other pets.

Table 11: Turnover from pets in the media (in million euro)

2013	Books	Magazines	Shows	TV	Total (rounded)
All pets	75	40	8	10-12	135
• Dogs	39	22	8	7-9	78
• Cats	8	8	*	2	18
• Other pets	28	10	*	1	39
- Ornamental birds	3	1	*	*	4
- Ornamental fish/ reptiles	19	6	*	*	25
- Small animals	6	3	*	*	9

* not possible to investigate, clearly attributable or relevant for the economy as a whole

B) Other turnover from pet ownership

Costs of electricity for aquaria/ terrariums:

The costs of electricity related to aquaria and terrariums are not negligible. For aquaria, the cost of electricity is estimated (depending on size and equipment of the individual aquarium) at 50 to 300 euro per year. For terrariums, the additional annual cost of electricity is estimated (depending on the size of the terrarium and the animal species) at 60 to 120 euro on average. Considering 2 million aquaria and 0.8 million terrariums, this would result in additional turnover of **approx. 150 million euro**.

Added costs for cleaning, repairs and changes in house, garden and car:

Dog owners sometimes have to make their garden 'escape-proof' with a new fence, the car needs a separator grid or a dog crate, bicycle riders buy a bike trailer for dogs or a basket to transport very small dogs, cat owners install a cat flap or make their balcony cat-proof, etc.

Especially in their first year, dogs and cats are prone to scratch a door or wallpaper, nibble at furniture, tear at curtains, gnaw on shoes, scratch the parquet floor, nibble on the carpet - which dog or cat owner hasn't already had expenditures for repairing those kind of damages? Frequent renovations are generally more the rule than the exception when owning a dog or cat, and the upholstery is often exposed to more wear and tear.

Assuming that at 6.9 million dogs and 11.5 million cats, when only about 10 percent of these pet owners would spend merely 40 euro (once) for one of the purposes listed above, this would add up to **70 million euro** or so.

Revenues from the tourism industry (dogs traveling along):

Many dog owners take their dogs along on vacation, and then incur a higher price in the hotel or the vacation home. On average, this added cost to the hotel room or vacation home is 5 euro per day. According to travel study by *BestFewo*[66], over 35 percent of people booking a vacation home take their dog along. The vacation rental market amounts to approx. 6 to 7 billion euro according to *Deutscher Ferienhausverband*[67] (German Vacation Rental Association). If indeed one third is generated by travelers with dogs and the extra dog charge would account on average for 3 to 5 percent of the vacation rental cost, this could be estimated at approx. 60 to 100 million euro. This appears somewhat high. (Considering this does not yet include the extra hotel charges.)

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[66] With more than 75,000 accommodations, BestFewo is the largest platform for vacation homes in Germany, covering the entire nation (*www.touristiklounge.de/reiseziele/bestfewo-reisestudie-2014-die-beliebtesten-reiseziele-deutschland*).

[67] On the European vacation home market more than 20 billion euro in turnover are generated every year, of that one third in Germany alone. (Source: *PhoCusWright's European Vacation Rental Marketplace, 2011 – 2013*.)". (*http://www.deutscher-ferienhausverband.de/*).

Different approach: If 10 to 15 percent of dogs were taken on a 10-day vacation every year, then the additional revenues in the tourism industry would amount to approx. 35 to 50 million euro. Assuming 'the truth' is somewhere in between, **approx. 50 to 60 million euro** could at least be assumed for dogs traveling with on vacation.

Private dog/ cat sitting

Many working and/or single dog owners do not like to leave their animal alone for too long during the day, and so they hire private dog walkers. Even during times of longer job-related absence or vacations, often the dog is not sent to an animal boarding facility, but instead given to private people who provide more individual and personal care. The same applies to cats, which anyway prefer to stay at home when their owners go on vacation, as long as they are well cared for. If 10 percent of dog owners and 5 percent of cat owners spend an average of just 15 to 20 euro per year for private dog/ cat care (perhaps also in the form of a gift bought on vacation for the carer), it would total at least **20 million euro**.[68]

Dog stations:

Some communities have introduced so-called dog stations, where dog owners can get bags free of charge to get rid of their dog's poop. The cost of this varies greatly depending on the number of dog stations and the 'kind of poop bag' used.

In Hamburg (No. 1!), about 24 million poop bags are meanwhile being distributed free of charge through drugstores, recycling yards of the city cleaning department or authorities and administration offices, and can be disposed of in about 8,900 specially designated wastebaskets. The cost of this is stated to be about 120,000 euro (considering revenues from dog tax of more than 3 million euro). Berlin has now 64 dog service stations, where a total of 250,000 reinforced paper bags can be dispensed and disposed of. Otherwise, poop bag dispensers are most often successfully placed in spa or vacation towns.

In those communities where poop bags are not provided free of charge, dog owners are still obligated to remove their dog's poop, where appropriate. That is why poop bags can also be purchased in a store (on average 1 to 3 cents per piece; whereas the city clearly gets a better price). Assuming 1 million dogs are taken for walks occasionally or regularly in places where the dog poop should be removed on the spot, then 600 million poop bags (either from the city or privately) would have to be used per year. Together with existing dog stations, where applicable, including regular restocking and disposal, **approx. 10 to 15 million euro** can be calculated across Germany.

[68] This 'market' is also very difficult to assess, as it is not taken into account in the official gross domestic product, as it is considered to be part of the so-called 'shadow economy'.

Miscellaneous:

At last, every pet owner spends money at some point on things for his/her pet that are not captured as either pet food, accessories or as part of any of the other previously listed categories:

- Dog owners need new weatherproof clothes and shoes more frequently
- Dogs, but also cats, bring more dirt into home and car, have their own blankets and towels, which must be washed, sometimes also soil the clothes of their owners, shed hair… Altogether, a lot more cleaning is required with pets (including energy cost, detergent cost, etc.).
- Purchases for pets: e.g. tennis or rugby balls, originally not intended as dog toys; dog/ cat blankets, actually made to be used by people; a homeopathic or herbal medication, which is purchased without veterinary prescription directly from the pharmacy; aquatic plants for the pond, set up for ornamental fish; energy and other costs, e.g. when cooking for a sick dog; t-shirts, cushions and cups printed with the photo of pet, etc. .…
- More often than not, pet owners volunteer at pet shelters, private pet aid organizations or dog training areas, by doing construction work or skilled labor.
- Cat charity work involves helping to catch and castrate cats living in the wild; this often entails travel costs, amongst others.
- Owners of a rescue dog usually train their dog at their own expense and have additional costs: High costs result in particular from traveling to the often remote training locations and to their rescue missions, from special equipment needed by dog handlers (safety shoes, gloves, flashlight, work clothes) and the necessary training and qualification of the dog handler (incl. first aid), etc.
- Gifts for pet lovers: There is a large variety of everyday objects that may be specifically designed with pet photos for animal enthusiasts and can be purchased as - more or less useful - presents for pet owners. The market for gift items for pets offers a large number of different products: Various kinds of dog and cat calendars, textiles with motives illustrating the own pet, card games with dog, cat or bird pictures, animal mouse pad, desk pad, animal foot mats, animal notebooks, bags/ pillows/ porcelain with animal scenes (cups, trays, figurines...), key-ring pendants, etc.
- If on average every dog or cat owner spends only 4 to 5 euro on such items (which would already account for the additional energy cost alone), this amounts to **70 to 90 million euro**.

Overall, the turnover from other costs of pet ownership results in **375 to 395 million euro**, **150 million euro** of which can be allocated **to aquaristics/ terraristics**, about **180 to 200 million euro to dogs** and **40 to 50 million euro to cats**.

Table 12: Other turnover in connection with pet ownership (in million euro)

2013	Pets in the media	Other turnover	Total (rounded)
All pets	Approx. 135	375 – 395	510 – 530
• Dogs	Approx. 78	180 – 200	260 – 275
• Cats	Approx. 18	40 – 50	60 – 65
• Other pets	Approx. 39	150	190
- Ornamental birds	4	*	4
- Ornamental fish/ reptiles	25	150	175
- Small animals	9	*	9

* not possible to investigate, clearly attributable or relevant for the economy as a whole

The other turnover in connection with pet ownership adds up to approx. 520 million euro, of which about 50 percent can be allocated to dog ownership, more than 35 percent to aquaristics/ terraristics, and the remainder to cats, small animals and birds.

Chapter 7:
Pet Shelters and Dog Tax

A) Pet shelters

In Germany, more than 500 pet shelters are incorporated into the *Deutscher Tierschutzbund* (the German Animal Welfare Association). Then there are the approx. 50 to 100 other pet shelters (particularly in the new German states) that are not incorporated in the *Deutscher Tierschutzbund*. Most frequently, they are under municipal responsibility. In addition, numerous other (private) initiatives also take in, care for and later find a new home for abandoned, neglected, homeless and ownerless animals. [69] These animals mainly consist of typical pets, rarely a goat, donkey or other farm animal. Dogs and cats are prevalent in pet shelters, but there are also a large number of small animals, as well as birds and reptiles.

According to a study by MAFO Institute[70] commissioned by the *Deutscher Tierschutzbund*, the average spending per pet shelter in 2008 was 296,900 euro. Assuming expenditures of meanwhile about 310,000 euro (considering the inflation rate) for an average pet shelter, and of nationwide at least 550 pet shelters, this adds up to total pet shelter expenditures in 2013 of **minimum 170 million euro**. According to MAFO, about 4.5 percent of this is spent on feed/ pet food (which doesn't seem like much, but is probably owed to the fact that pet shelters get a lot of food donations from local companies), and approx. 11.5 percent on veterinary treatments. Both of these expenditure types are already captured in other turnover categories (see Chapter 2 and 3).

As such, the expenditures/ costs incurred by pet shelters that have not already been captured otherwise, can be estimated at **about 140 to 145 million euro**. Then there are also expenditures of the many initiatives mentioned in the area of cat aid and catteries, the majority of which have already been captured under food, accessories or veterinary turnover. Calculating approx. 5 million euro for this, it adds up to a total of 150 million euro for pet shelters and other animal aid organizations.

Allocating the cost to dogs, cats and other pets is not that simple, as a large part consists of overhead costs. Based on the average rates that pet shelters charge for boarding pets[71] (which should reflect the pet care costs), and on the relative number of dogs, cats and other pets in pet shelters, the expenditures of pet shelters can be attributed as follows: dogs 42%, cats 46% and other pets 12%. However, a more detailed breakdown of other pets, i.e. by

[69] Included are in almost all cities the local 'Cat Protection Association' and 'Cat Aid' societies. These regionally limited cat societies take care that cats living in the wild get castrated (relevant turnover is captured in the veterinarian category), and help find new homes for cats - often through private initiatives. The financing comes from donations and memberships, whereas the work is mostly done by volunteers.

[70] *MAFO-Institut*, *'Wirtschaftliche Lage der Tierheime in Deutschland II',* Dec 2009 and April 2010, Schwalbach

[71] ibid

small animals, birds, reptiles is not possible. On average, this allocation is also comparable with our own pet shelter surveys; however, there is a very wide range in the estimated allocation of the costs.

Currently, pet shelters are financed on average about 55 percent by donations, bestowals, inheritances, membership fees, sponsoring and other bequests, whereas almost 25 percent is from income earned (from adoption: 22 percent or from boarding services: 2 to 3 percent), and about 20 percent comes from permanent community subsidies.[72] However, individual financing types and percentage vary considerably between the municipalities. For example, there are some that are almost fully funded by the municipality, and others that have to almost entirely finance themselves.

Table 13: Turnover from pet shelters*	
2013	**In million euro**
• **Total**	**150**
• **Attributable to dogs**	**63**
• **Attributable to cats**	**69**
• **Attributable to other pets**	**18**

* Expenditures that have not already been captured in either the pet food or veterinary service category.

Thus, expenditures (above and beyond feed/ pet food, accessories and veterinary services for the animals) arising from the necessity and existence of pet shelters add up to at least 150 million euro.

[72] In line with the MAFO study.

B) Dog tax

Of course, the government also collects money on all the economic activities related to pet ownership, either through the income tax of employees, value added tax, insurance tax, commercial tax, etc. But above that, there is another direct link between pet ownership and public finances.

The dog tax is a municipal tax. In **2013, the income from dog taxes** amounted to **approx. 300 million euro**[73], thus constituting about 0.53 percent of the municipal taxes.

Dog tax digression:

According to historical sources, a dog tax was recorded in Germany for the first time around 1500. In the 19th century, modern dog taxes were introduced mainly as a measure by the police, designed partly as a luxury tax, partly as a user fee. Since 1949, the dog tax is treated as purely a municipal tax. The purpose is mainly regulatory, for example, the tax is used as a measure to limit the number of dogs.[74]

The amount of dog tax varies between communities. In addition, the tax rate is usually also based on the number of dogs held in one household. For the first dog, the tax ranges from 30 to 160 euro (in most cases between 60 and 120 euro), between 40 and 270 euro as of the second dog, and from 200 up to over 1,000 euro for 'dangerous dogs' (wherever a special so-called 'fighting dog tax' has been imposed). The dog tax tends to be higher in large cities than rural areas.[75]

Guide dogs (for the blind), service dogs, dogs used by forestry officials and gamekeepers are usually exempt from this tax. Rescue dogs are not exempt from the tax everywhere or just partly. Often, tax exemptions are also granted for dogs adopted from pet shelters (for a maximum of two years). Some cities also grant so-called social reductions[76]. Generally, all these cases of tax exemption affect only 2 to 5 percent of the dogs. However, not all dogs are registered for tax purposes[77]: Considering a dog tax income of 300 million euro and an estimated 6.9 million dogs (see Chapter 1), the average dog tax (even taking into account

[73] 298,882,000 euro accord. to *Statistisches Bundesamt*, *Fachserie* 14, *Reihe* 4, Finance & Taxes, Tax Budget.
[74] There is no objective justification why the number of dogs should or must be limited. Even less so when considering the relatively dog ratio in Germany vs. rest of Europe.
[75] See the very comprehensive dog tax survey 2010 by *Deutscher Städtetag*, Berlin 2011
[76] For dogs of people receiving benefits according to the Federal Social Assistance Act and other people with incomes in a comparable range.
[77] Also, the obligation to register - e.g. introduced in Niedersachsen in 2013 - valid irrespective of being captured for tax purposes, is not being fully met. In Niedersachsen, less than 200,000 dogs are currently registered. Considering an estimated national dog population of 6.9 million, about 600,000 dogs are most likely living in this German state alone.

300,000 tax exemptions) amounts to only little more than 45 euro per year. However, this is not consistent with the mentioned individual taxes, which are a lot higher on average. Most likely, this means there are only 4 to 4.5 million dogs recorded for tax purposes. This is also clear from the dog tax survey 2010 by the Association of German Cities (*Deutscher Städtetag*). An estimated dog population of 6.9 million dogs and a human population in Germany of close to 82 million results in a 'dog density' of about 85 dogs per 1,000 residents. However, the dog tax survey 2010 by *Deutscher Städtetag*, the density of registered dogs per 1,000 residents is reported to be somewhere between 25 and 50, i.e. significantly lower.

Indeed, it is highly disputed whether such a dog tax is actually justified. One possible reason for a regulatory limitation of dog ownership would be, for example, high dog-relevant public expenditures, such as the removal or avoidance of 'dog poop' (using so-called dog stations and poop bags) in residential areas and on the streets. The expenditures invested on this vary greatly between the different municipalities. According to our inquiries, the regular street-cleaning service has not asserted a significant added workload from removing dog poop. Wherever dog stations have been set up, the relevant expenditures account for max. 10 percent of the respective dog tax income. (And in many places, dog stations do not exist at all or anymore, so that nationwide, the share of dog tax income used for this purpose is even much lower. See also Chapter 6)

However, municipalities often contribute a certain percentage (20 percent on average; see above) to the funding of public pet shelters (nationwide approx. 34 million euro). Because pet shelters on average spend 42 percent of their income on dog care, only this percentage of the community's contribution to pet shelter funding can be attributed to dogs (= close to 15 million euro). This shows that the subsidy for pet shelter financing attributable to dogs again constitutes only a fraction of the dog tax income (i.e. 5 percent).

Sometimes, other adverse effects from dog ownership are referred to, such as dog bites or diseases transmissible to humans (zoonosis), but nowadays this hardly plays a crucial role, as most dogs are provided with excellent veterinary services (inoculations, worm cures, etc.). On the other hand, the growing popularity of exotic animals or farm animals does more present a risk, e.g. from the avian flu.

Overall, it shows that the expenditures for eliminating any kind of burden to society from dog ownership only accounts for a fraction of the dog tax revenues, i.e. the dog tax primarily contributes to cover other costs incurred by the community, and thus has a purely fiscal reason.

Therefore, arguments opposing the dog tax often include:

- The dog tax is purely a luxury tax, not dedicated to a specific purpose. But dogs are social partners (often also for low-income people) and not luxury goods.
- In addition, the positive external factors of dog ownership that benefit society, e.g. in the form of better physical and psychological human health, are neglected.

- Dog taxes infringe on the principles of equal treatment and the prohibition of arbitrariness, as for example, cats and horses can have similar adverse external effects, but are not taxed.

That is why within Europe, many countries have already abolished the dog tax (some never had it), e.g. in Belgium, Denmark, UK, France, Greece, Italy, Croatia, Norway, Poland, Sweden, Spain, Hungary.

Chapter 8:
Significance of Pet Ownership for Gross Domestic Product and Jobs

Taking all economic sectors concerned into account (Chapters 2 to 7), **pet ownership in Germany** results in expenditures and thus an **overall economic demand of approx. 9.1 billion euro**. This corresponds to about **0.32 percent of our Gross Domestic Product (GDP)**. More than 50 percent can be attributed to dog ownership, over 35 percent to cat ownership and less than 15 percent to other pets. Of the latter, small animal ownership and aquaristics/ terraristics play about an equal role, whereas ornamental bird ownership has the smallest overall economic impact.

Table 14: Summarized results of the economic factor 'pet' in million euro (rounded)**

2013	Food/ accessories	Health	Breeding/ clubs	Services	Other turnover	Pet Shelters/ taxes	Total (rounded)
All pets	4,800	2,100	560	700	500	450	9,100
Dogs	1,880	1,100	370	665	260	360	4,635
Cats	2,235	800	65	35	53	70	3,260
Other pets	685	200	125	2	189	20	1,220
⇒ Orn.birds	110	*	15	*	4	*	130
⇒ Orn.fish/ reptiles	285	*	85	*	175	*	545
⇒ Small animals	290	200	25	*	9	20	545

* not possible to investigate, clearly attributable or relevant for the economy as a whole
** Due to rounding, the total of the single values does not always correspond exactly to the total (rounded) values

On the significance of pet ownership in comparison:

- In Germany, the entire land and forestry sector including fishery accounts for only about 0.8 percent of the GDP, i.e. the economic contribution of pet ownership (0.32 percent of the GDP) is equivalent to about **40 percent of the total contribution by the German agriculture sector**.
- In 2013, turnover on the German book market added up to about 9.5 billion euro. With about 9.1 billion euro, German pet ownership as such has a **similar economic impact as the overall book market**.
- In 2013, Germans spent about 65 billion euro on traveling abroad. **Compared to the money spent on traveling abroad,** the total expenditures for pet ownership of 9.1 billion euro **are very moderate.**

Impact on employment: Calculating with an annual gross salary of approx. 45,000 to 50,000 euro per year for an average job, then altogether **approx. 185,000 to 200,000 full-time jobs and/or full-time equivalents** are connected to pet ownership. However, in many areas (veterinarians, nonmedical practitioners, veterinary physiotherapists, pet shelters, pet breeding, animal boarding services, dog training schools, pet groomers) part-time work, marginal employment and below-average wages play a big role, so that **de facto** a lot more jobs - **about 250,000 to 280,000** - depend on pet ownership.[78]

Table 15: Jobs resulting from pet ownership

2013	Turnover in million euro	Jobs / full-time equivalents	Jobs de facto
All pets	9,100	185,000 – 200,000	250,000 – 280,000
• Dogs	4,630	95,000 – 100,000	125,000 – 140,000
• Cats	3,260	65,000 – 72,000	88,000 – 100,000
• Other pets	1,220	25,000 – 27,000	37,000 – 40,000

However, apart from this measurable creation of value, there are still economic and social returns that are not fully included in the gross domestic product, such as the services of 'working dogs' or the impact of pet ownership on health and quality of life. This is the topic of the following chapter.

[78] According to the MAFO study, there are close to four full-time jobs per pet shelter. But as many work there only few hours or part-time, 11 people are somehow active in each pet shelter on average. This does not yet include the numerous volunteers.

Chapter 9:
Economic and Social Costs plus Earnings from Pet Ownership

A) The dog as service provider

While in past centuries dogs were used much more for economic or utility purposes, e.g. as herding dogs, watch dogs or guard dogs, today's focus is on the family dog. Nevertheless, there are also dogs today that provide obvious economic services to society. (In an economic context, this can also be called 'added value', even though these services are included in the computation of the gross domestic product only to a limited extent.) As a rule, the services provided by these dogs are hard to measure in monetary value, since they are usually not sold on the market and therefore are not evaluated at market prices. The services they provide, including security, protection, rescue, mobility (e.g. for the blind) among others, are goods the value of which can hardly be expressed in euro amounts. Frequently, the services are measured only by the costs the animals incur, but usually the value of these services goes far beyond that.

So-called working dogs serve, for example, as police dogs, watch and guard dogs, rescue dogs, hunting dogs and as so-called service dogs (e.g. guide dogs for the blind, assistance dogs, therapy dogs, etc.).

⇒ Service dogs and private watch and guard dogs

So-called service dogs are deployed in the German Police Force, Armed Forces or by Customs. Moreover, watch and guard dogs are used on private properties, business premises and by security agencies. Even if only some of these dogs are kept at home by the dog handler – though fortunately, this is the case especially with police dogs meanwhile - and thus not all service dogs can be consistently qualified as 'pets', their economic and social significance will be elaborated here just briefly.

In Germany, dogs have been accompanying police officers on duty for approx. 100 years. Today, about 4,200 police dogs and other service dogs (at the border police, armed forces, customs administration) are used in Germany[79]. Apart from being used as a guard dog, dogs are deployed for many diverse special tasks. Here, drug-detection (sniffer) dogs and explosives-detection dogs play the largest role.

When the running costs for a police dog is calculated at approx. 1,200 euro (food, accessories, veterinarian[80], etc.), and taking into account the investment cost[81] plus the average deployment period of 7 years, the **average total cost would be 1,500 euro per year**

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[79] See *Mars Heimtier-Studie 2013*, as referenced, p. 180.
[80] The risk of injury is much higher than with 'regular' dogs.
[81] The average purchase price of a suitable working dog for the police (at a dog age of one to two and a half years) is about 2,000 to 3,000 euro (which would include basic training).

for one service dog. Considering about 4,200 dogs are in 'public service' in Germany, this constitutes an amount of about **6 million euro per year**. At this value, the service dogs are also included **in the gross domestic product**.

The **services** of these special dogs (e.g. sniffing out drugs in the value of several 100,000 euro, finding explosives and preventing an explosion, finding a dangerous person on the run, in addition to protecting the dog handler in situations of conflict with violent people and of de-escalation during large-scale events) **exceed their cost many times over**. Thus, they create an added value, which is included in the official gross domestic product at best in the amount of the actual cost incurred, but de facto is much higher.

⇒ Guide dogs for the blind

Other important service providers are guide dogs, an estimated 2,500 of which are carrying out their duty every day.[82] Contrary to the frequently used white canes or electronic aids for the visually handicapped, the guide dog not only recognizes obstacles, but leads the person around it and can also directly head for specific designations. For their impaired owners, having a guide dog means to be more independent, in addition they often improve the mental and physical condition of the owner as well just by being there.

This service (added value) of a guide dog for the blind is difficult to assess in monetary value. Here, the cost must also be used as a first reference point.

The health insurance companies set the cost for a guide dog at approx. 20,000 euro for acquisition, training and veterinary health check. Apart from the running costs of nutrition, care, etc., an annual 'depreciation' must also be considered here - depending on the dog's 'service life' - in an amount of 2,000 to 2,500 euro. Applying an average value of 1,000 euro per year as the running costs result in a total average **cost** of a guide dog **of annually 3,000 to 3,500 euro**. At 2,500 guide dogs in Germany, this constitutes an amount of about **7.5 to 9 million euro per year**. This is about the amount considered **in the gross domestic product** for guide dogs.

The objective and subjective value of a guide dog for its handicapped owner, constituting the increased autonomous mobility and greater independence, is for them surely worth more than 3,000 to 3,500 euro per year. The actual added value of such a dog is therefore **also clearly higher than the cost** actually spent on the animal.

[82] Information from *Deutscher Blinden- und Sehbehindertenverband* (DBSV). See also *'Der Blindenführhund'*, as issued by the DBSV, 2006

⇒ Rescue dogs

The rescue dog is another important working dog, which for the most part lives as a family dog. However, the dog must be constantly trained in order to be fit for use in an emergency. In Germany, all recognized relief organizations (such as ASB [*Arbeiter-Samariter-Bund*], DRK [Red Cross], *Johanniter*, *Malteser*, *DLRG*), numerous fire brigades and the THW [*Technisches Hilfswerk*] maintain special canine units. In addition, there are several umbrella associations (e.g. *Bundesverband Rettungshunde, Deutscher Rettungshundeverein, Internationale Rettungshunde Organisation* and many more) as well as a number of 'open canine units' without ties to any association. The total number of all rescue dog teams/ canine units in Germany is estimated at currently far above 400.[83] This means that there are approx. 2,500 - 3,500 active rescue dogs. In most cases, the dog handlers are volunteers.

Generally, the training of a rescue dog takes two years. Above that, a reliable search dog must continue to undergo regular training in order to be fit on call at all times. Therefore, training of the dogs is frequent and regular, i.e. handling rescue dogs entails investing a lot of time. Repeatedly, the training areas (e.g. high mounds of construction waste or demolition sites of companies used as experimental rubble fields) are changed in order to challenge the dog.

This also requires a high level of commitment from the dog handlers. They must know how to use a map and compass in order to find their bearings in difficult terrain, and have completed a training in radio transmission (specifically *BOS-Funk*). In addition, the dog handler is also the first contact person to the missing victim and must therefore be able to ensure proper initial care, beyond regular first aid measures.

Surveys of rescue dog handlers reveal that they spend **approx. 3,000 to 4,000 euro per year on their dog and its task as a rescue dog**, thus clearly more than on a 'regular' family dog. High costs result in particular from training, rescue operations, travel cost to the training locations and to their aid missions, from special equipment of the dog handler (especially leash, transport kennel, etc.), higher veterinary costs due to injuries incurred in action, special gear (safety shoes, gloves, flashlightwork clothes), and the qualification of the dog handler, etc. For the most part, these costs must be covered by the dog handler, and is at best tax deductible. Frequently, rescue dogs are not even exempt from dog tax!

The contribution of rescue dogs to the economic creation of value cannot be based - similarly as with the fire brigade - on the number of actual deployments, as the services offered must be maintained and available at all times irrespective of actual deployments. Besides, success - e.g. saving a human life - can hardly be expressed in monetary value. Here also, at best the cost for setting up the service can be determined. Considering approx. 3,000 rescue dogs and 3,000 to 4,000 euro in running costs per dog, this is about **10 million euro**. **Here, the added value gained (e.g. rescuing human lives) also goes far beyond that.**

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[83] INFO SHEET E4-003-12 of the DLRG

⇒ Assistance and therapy dogs

Assistance dogs can help their owners in various ways to master everyday life. What they learn is specifically coordinated with the needs of the respective owner in mind. For example, they can help by lifting things off the ground, retrieving objects from shelves and operating door handles, or opening and closing drawers and cabinets. Some dogs can alert their handlers to conditions, e.g. hypoglycemia, asthma attacks or epileptic seizures before they occur. Frequently, these dogs have also learned how to get help in an emergency. Training costs vary - depending on scope and type of assistance -, amounting to **5,000 to 10,000 euro on average.** However, assistance dogs - as opposed to guide dogs (for the blind) - are not financed by health insurance companies, even though they also significantly improve the independence of handicapped individuals, their quality of life, and consequently, their psychological and physical health. And here too, the **'added value'** goes far **beyond what is spent** on the animal.

The purpose of **therapy dogs**, on the other hand, is primarily to positively influence the emotional condition of ill, handicapped or older people. They are often used with psychologically disturbed children or also in senior citizen and nursing homes. Sometimes just by their presence, but also due to their body contact, communication and way of interacting, dogs have an encouraging effect on people. A therapy dog is used specifically in support of conventional treatment such as psychotherapy, occupational therapy, physiotherapy, speech therapy or therapeutic pedagogy, as a 'co-therapist', and otherwise as a regular family dog in the therapist's home. The training costs are relatively low: The dogs have an effect just by their presence, as long as they remain balanced and calm.

⇒ Hunting and herding dogs

Supporting the hunt and guarding herds are probably the oldest 'occupations' of dogs. While 'herding' is meanwhile frequently practiced as a dog sport only, today there are still many dogs being trained and handled as hunting dogs (e.g. retrievers, hounds, flushing dogs, gun dogs, pointers). Considering there are about 350,000 hunting license holders in Germany, however, not all are actively hunting, a number of 250,000 to 300,000 dogs used for hunting purposes in Germany can be safely assumed. In the past, these dogs were used primarily for seeking out, pointing out and/or making the game move. Meanwhile, most of the dog's work now begins 'after the shot'. Locating game that has been injured is important for animal welfare reasons alone, but is also of certain significance economically.

B) Pet ownership and health

When researching the impact of pet ownership on the health of pet owners and their environment, possible biting or scratching injuries[84], allergies as well as potential zoonosis diseases could act as negative aspects. Zoonosis is the transmission of a disease (e.g. via viruses, bacteria, fungi, mites, worms) through direct contact between a human and an animal. However, information on the actual extent of such transmissions through pets and their costs is not available.

An overview of the theoretically possible ways of infection was presented during a science workshop 'Pets & Zoonosis' in May 2014 at the University of Leipzig. Thus, it became clear that the risk of zoonosis emanates primarily from 'exotic' animals (many snakes and reptiles), because often they originate from uncontrolled wildlife or breeding stock, both inland and abroad, from where they can bring foreign parasites and pathogens (esp. salmonella) into the home. The risk from other pets is relatively low, as long as they are examined regularly by a veterinarian and some basic hygiene rules are followed when handling them. In this context, the conference chair[85] strongly emphasized that irrespective of this, the positive influence of pets on the quality of life is to the fore and has already been proven in many studies.[86]

There are indeed a number of studies referring to the positive impact of pet ownership on the health and contentment of pet owners.[87] Most studies refer to dog or cat ownership. The positive effects mentioned are:

- Pet owners suffer less often from minor health problems.
- Pets help to relieve stress.
- Pet ownership lowers the risk of heart attack and improves cholesterol levels.
- Pet owners are less lonely than individuals without animals.
- The life-satisfaction level of pet owners is higher and they are more optimistic.
- Older pet owners are better able to deal with radical changes in their lives than their peers without animals.
- The average activity level of seniors with a pet is noticeably higher than that of seniors without a pet.
- In nursing homes, the average daily requirement of medicines decreases when animals are integrated into the overall care.

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[84] Here, the above indicated biting incidents play the biggest role with dogs. In spite of this, the significance of the treatment costs in relation to the full scope of medical treatments is marginal, i.e. there are no precise figures available on the medical costs incurred from biting incidents.

[85] Prof. Dr. Martin Pfeffer, *Institut für Tierhygiene und Öffentliches Veterinärwesen*, University of Leipzig.

[86] A report in the German Federal Health Monitoring, Issue 19, 2003: *'Heimtierhaltung – Chancen und Risiken für die Gesundheit*' by Albert Weber and Andreas Schwarzkopf from the Robert-Koch Institute also come to the conclusion that the positive impact of pet ownership on people surpasses the potential hazard.

[87] A comprehensive overview on relevant studies in this area can be found in *Mars Heimtier-Studie*, 2013, p. 49 and pp.125 .

For dog owners in particular, it was discovered that:

- Dog owners suffer less from colds, flu and headaches, because they build up more resistance due to their daily walks.[88]
- Dog owners have a better chance of surviving heart attacks than those without dogs.
- Dog owners less often have issues with blood pressure.
- Older dog owners see a physician less often than peers without a dog.
- Therapy dogs can also contribute by inducing therapeutic effects, such as the normalization of blood pressure, overall improvement of personal drive, boosting of mental and motor skills, stress relief, creating a diversion from pain or also learning social behavior.
- As for children, the psychological well-being and social interactions are strengthened.

All the positive effects of pet and especially dog ownership on the health and well-being of humans evidenced in these studies, naturally also reflect in **less spending for the medical care of pet owners** versus people without pets. This relieves health insurance and long-term care insurance companies of some financial pressure (because dog owners stay fit longer).

A study has been made about the specific impact of pet ownership on the health and health costs in Germany (Grabka/Heady[89]). It was based on data of the Socio-economic Panel (SOEP) and refers to the year 2001. According to that data, pet owners in Germany went to see a physician on average 7.5 percent less often than people without pets.[90] Of course, it cannot simply be concluded that the medical fees and medicine for pet owners are also lower at the same rate. The reduction is rather a result of fewer consultations due to trivial illnesses (colds and the like), because they either do not occur anymore or are no longer perceived as so serious. However, these illnesses are of the 'inexpensive' category. On the other hand, on average more than half of the medical costs in people are incurred in their last two years of life.[91] In this last life-span clearly fewer pets are held, and ultimately in the long run, a lot of the medical costs in this stage are not to be avoided, even with the help of pets. Moreover, the lower number of medical consultations for pet owners could also be an indication that only healthier individuals get pets.

All this has lead to the following calculations: In Germany, more than 31 million people live in co-existence with a pet, thereof about 24 million with a dog or a cat. If these 24 million dog and cat owners have on average 7.5 percent fewer medical consultations than non-dog/cat owners (and if this would indeed be due to pet ownership), then pet ownership would have reduced the number of doctor's visits nationwide by about 2 percent. If these 'savings' in medical consultations are rather of the 'inexpensive' kind, then the expenditures

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[88] In our own pet owner survey (Chapter 10), over 32 percent of dog owners also responded that their number of doctor visits (not counting preventive check-ups and dental care) had decreased since owning a dog.

[89] Heady B./ Grabka M., Pets and Human Health in Germany and Australia, in: Social Indicators Research, Vol. 80, 2007, pp. 297,

[90] The SOEP surveys from 2011 referred to in Chapter 1 incidentally also show this below average frequency of medical consultations required by pet owners (see p. 12).

[91] Heady B./ Grabka M., Health Correlates of Pet Ownership From National Surveys, in: Mc Cardle, P./ Mc Cune S. et al. (eds.), How Animals Affect Us, American Psychological Association, Washington, 2011, pp. 153

saved on medical treatments and medicines would indeed be smaller, perhaps only 0.5 to 1 percent.

Nevertheless, considering health expenditures of close to 310 billion euro in Germany[92], this still would be **1.5 - 3 billion euro, the amount of savings for the German health system** as a result of pet ownership.

[92] OECD Health Report 2014

Chapter 10:
Evaluation of the Pet Owner Survey

A) Survey content

From December 2013 until March 2014, a pet owner survey was carried out as part of this study. The survey was partly done face-to-face when interviewers approached pet owners directly, either in their private or work environment, on typical dog walkways, in front of pet stores, etc. The other part of the questionnaires was completed online, whereby information about participating in the survey was spread by different printed media and Internet forums. Consequently, people that use the Internet a great deal, plus are strongly committed to pet activities and thus very active in forums, are overrepresented. People whose pets clearly play a more subordinate role, and who are therefore more likely to spend less on their animal, are altogether somewhat underrepresented.

About two thirds of the respondents originate from three German states: Niedersachsen, Nordrhein-Westfalen and Hessen. Somewhat underrepresented are, for example, southern and eastern German states such as Bayern, Baden-Württemberg, Berlin, Mecklenburg-Vorpommern, as well as rural areas. Therefore, on a regional level, the sample is also not necessarily representative for Germany overall, because pet owners in the latter regions possibly have a slightly different spending behavoir plus (a lower) spending propensity in regards to their pets.

The following percentages all relate to the mentioned survey sample. Due to the **not completely verified representativeness** of the sample, they cannot be transferred exactly to the whole of Germany.[93] However, they do provide some relevant dimensions, at least roughly.

Overall, the **pet owner survey yielded 1,090 respondents** (see Table 16). A certain number of pet owners have more than one animal species. Thereby, the number of captured pet ownerships is higher.

Table 1: Number and distribution of surveyed pet owners by animal species

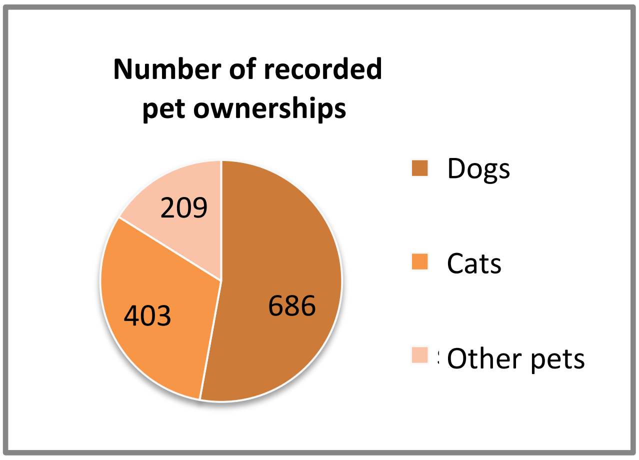
Type of pet owner-ship	Only dogs	Only cats	Only other pets*	Dogs and cats	Dogs and other pets*	Cats and other pets*	Dogs, cats and other pets*	Total
Number of pet owners	535	278	102	68	50	24	33	1,090

* Here, 'other pets' include small animals, ornamental birds, ornamental fish and terrarium animals.

[93] In comparison to the nationwide average, it shows in particular an above average spending propensity of the respondents - as could be calculated from the figures in Chapter 2 to 6.

Approx. 16% of the pet owners in this survey own more than one animal species, so that the **number of pet ownerships captured is 1,298** (see Ill. 1 for allocation).

Illustration 1



* Here, 'other pets' include small animals, ornamental birds, ornamental fish and terrarium animals.

Frequently, one household owns several animals of the same species. This is more often the case with cats than dogs: **Close to 18%** of the responding dog owners have **more than one dog, approx. 40% of** the responding cat owners have **more than one cat.** On average, there are **approx. 1.25 dogs (per dog household)** and **approx. 1.75 cats (per cat household)** in the surveyed households.

Illustration 2

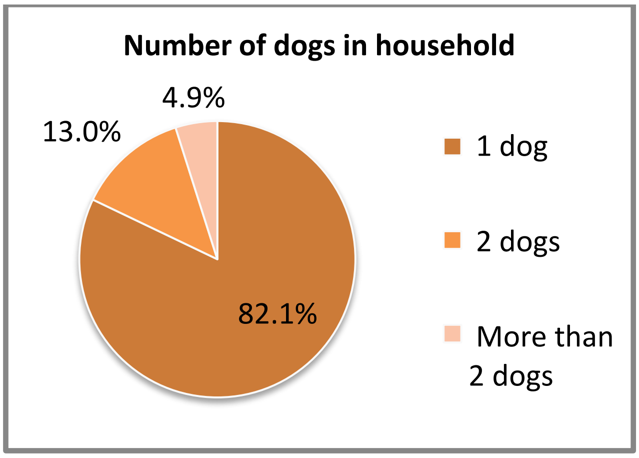
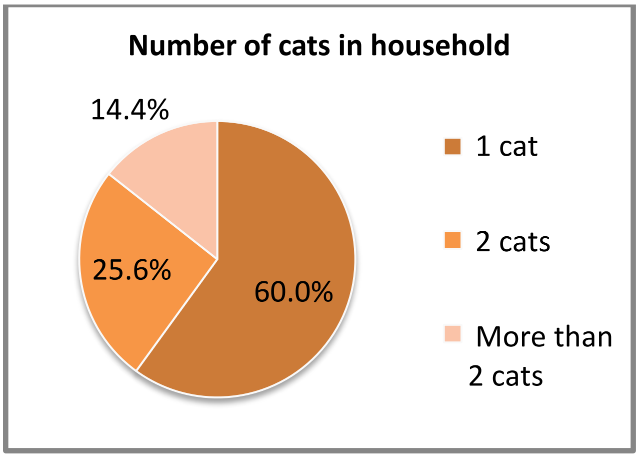


Illustration 3



The small animals (different types of rodents) make up the majority of **other pets**, followed by ornamental fish and terrarium animals. Ornamental birds constitute the smallest percentage (see Ill. 4). With more than 47%, rabbits/ pygmy rabbits dominate among **rodents**, followed by guinea pigs with close to 28% and hamsters with over 10%. The remaining rodents (rats, mice, degus, cururos and others), together with the rest of the small animals (e.g. ferrets), make up about 15% (see Ill. 5). Among **terrarium owners**, turtles also play a major role with over 40%, besides pogonas (bearded dragons), axolotls, snakes, iguanas and other similar reptiles. Approx. 20% of the responding pet owners have two or more **various kinds of small animal species**, so that here also the number of pet ownerships is larger than the number of pet owners.

Illustration 4

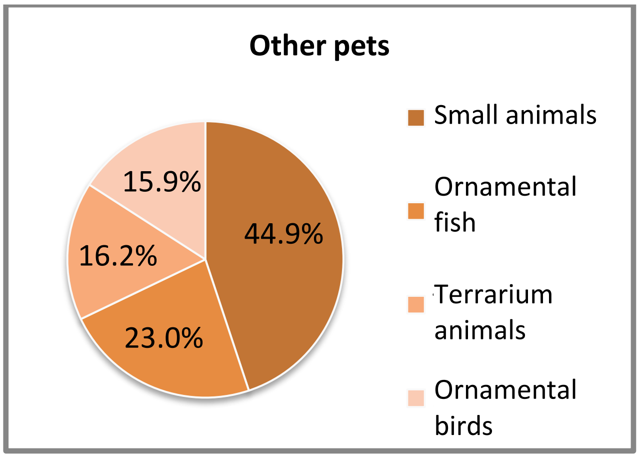
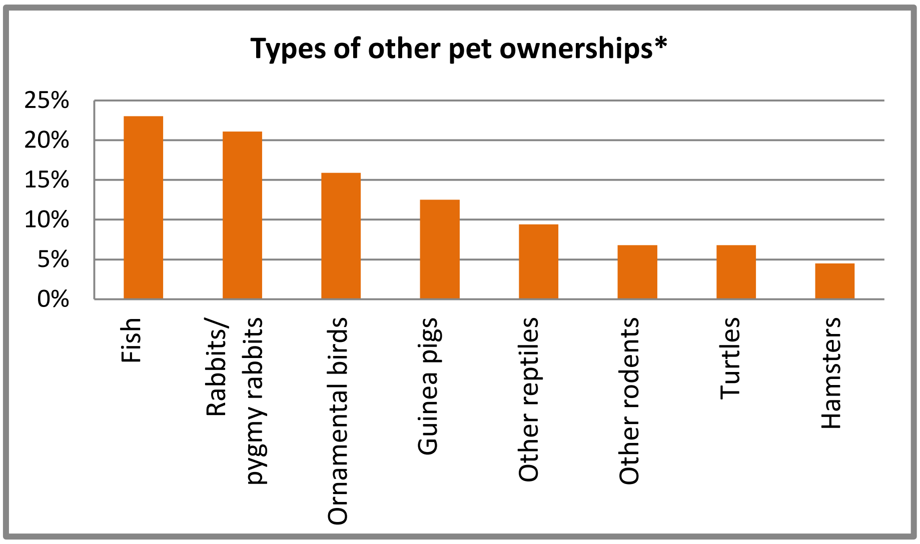


Illustration 5



* The vertical axis reflects the number of surveyed small animal owners with their respective animal species.

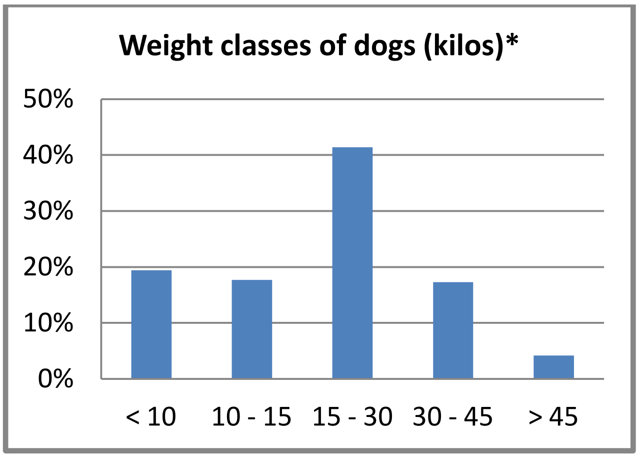
Frequently, **several animals of the same species** are owned here as well:

Table 2: Several animals of one species in one household					
Number of relevant animals	**1**	**2**	**3-5**	**> 5**	**Households**
Birds	21.4 %	50 %	14.3 %	14.3 %	100 % = 42
Fish (number of aquaria)	80.3 %	11.5 %	6.6 %	1.6 %	100 % = 61
Rabbits/ pygmy rabbits	25 %	51.8 %	19.6 %	3.6 %	100 % = 56
Guinea pigs	3 %	66.7 %	15.1 %	15.2 %	100 % = 33
Hamsters	58.3 %	8.3 %	16.7 %	16.7 %	100 % = 12
Other small animals	22.2 %	27.8 %	33.3 %	16.7 %	100 % = 18
Turtles	50 %	50 %			100 % = 18
Other reptiles	32 %	12 %	36 %	20 %	100 % = 25

B) Results for dog ownership

The dogs recorded in the survey can be broken down into the following 'weight classes'. Over 40 percent of the recorded dogs have a weight of 15 to 30 kilos, approx. 37 percent weigh only up to 15 kilos and more than 20 percent are over 30 kilos.

Illustration 6



* The vertical axis reflects the percentage of recorded dogs to be allocated to the respective weight.

Close to 55% of the dogs were specified as a **purebred dog** by their owners (see Ill. 7).

A little more than one third of the dogs were acquired directly from a breeder (see Ill. 8). This includes not only commercial breeders, but also private breeders. The statement that the dog was acquired from a 'private source' (approx. one quarter of the animals) also includes those dogs that were returned from previous owners after some time, in addition to puppies born in private households - which was not always planned. Animal welfare was indicated as the **origin** for 28 percent of the dogs.[94] This refers to animals from pet shelters and other animal welfare organizations. As for animals coming from abroad, most of them were brought to Germany through animal welfare programs (mostly adult animals), whereas a smaller part - most often puppies - is indeed imported through dealers.

Illustration 7

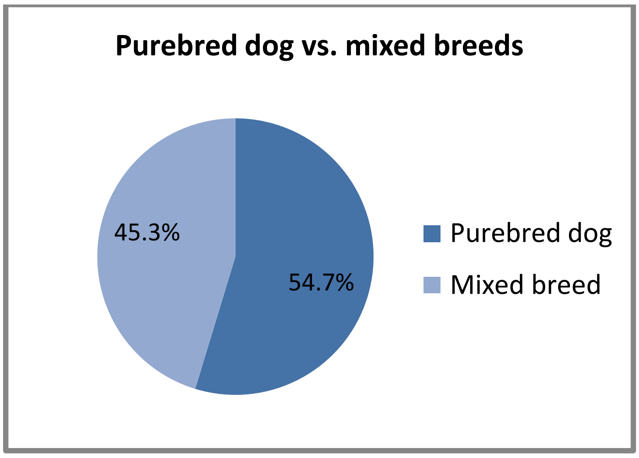
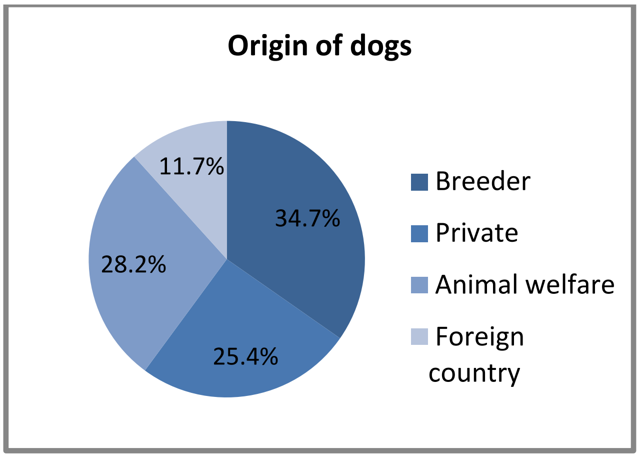


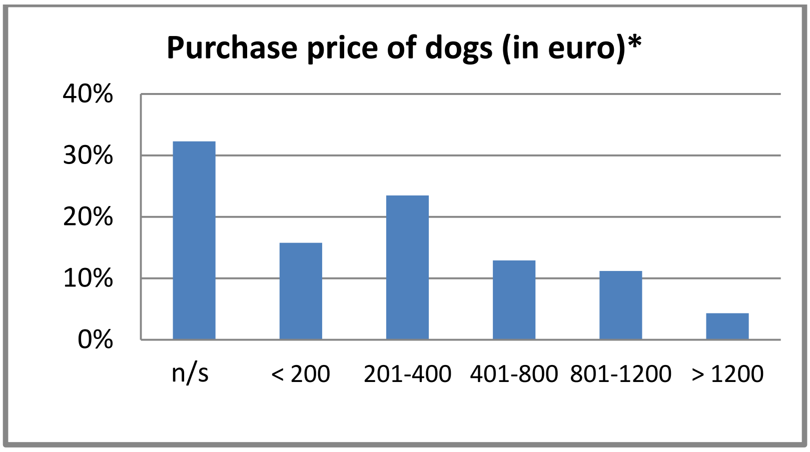
Illustration 8



[94] This also seems out of proportion versus the national average, which can be gained from Chapter 5.

Purchase prices vary strongly (see Ill. 9). For the most part, prices ranged from 800 to 1,200 euro, but partly even up to 2,500 euro is paid for purebred dogs from commercial breeders. Privately procured animals often go for prices from 300 to 600 euro. For animals obtained through animal welfare organizations, generally a nominal charge is requested (typically 300 to 400 euro, which means they are also vaccinated, de-wormed and equipped with a chip). As the nominal charge was in many cases not regarded as a 'purchase price', a relatively high number of the respondents provided no information as to the purchase price.

Illustration 9



* The vertical axis reflects the percentage of recorded dogs to be allocated to the respective purchase price.

Concerning the **running costs of dog ownership**, the following data was provided:

Illustration 10

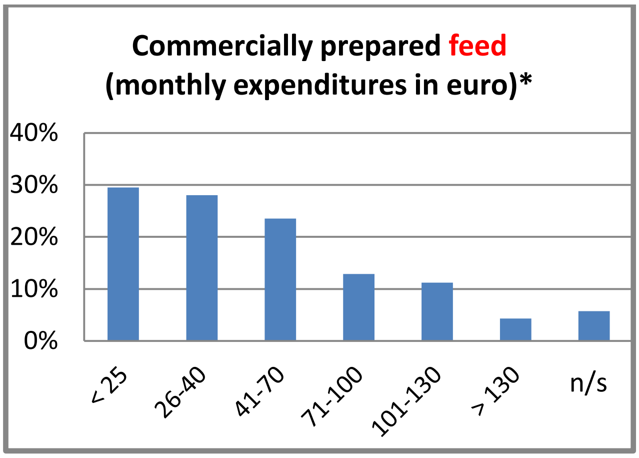
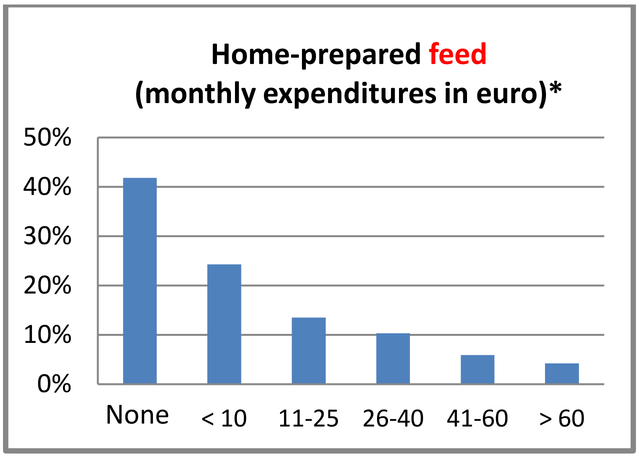


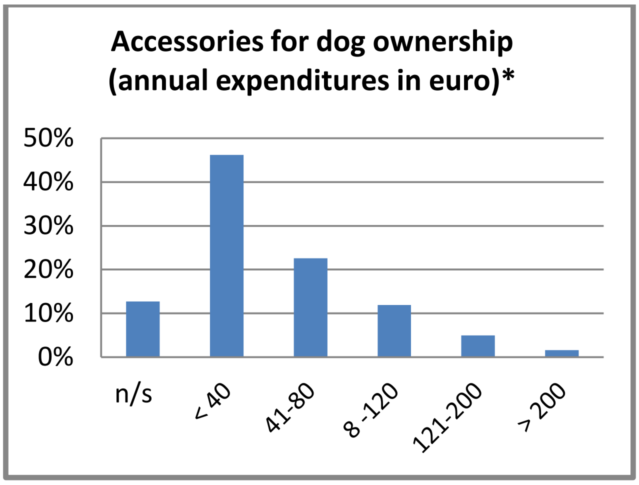
Illustration 11

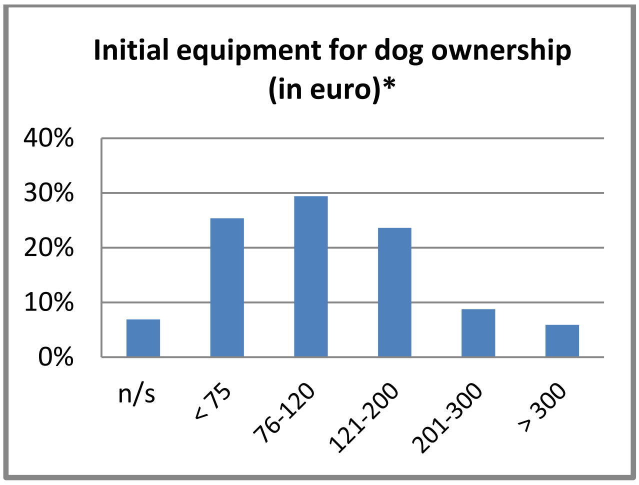


* The vertical axis reflects the percentage of recorded dogs to which the respective level of expenditure applies.

The respondents in this survey spend on average more for commercially prepared dog food than the national average in Germany, the data of which is captured in Chapter 2. However, this also includes the (expensive) diet food obtained from veterinarians, which is fed to many old or chronically ill dogs and not included in Chapter 2, but rather is under veterinary turnover in Chapter 3. As for the data on home-prepared dog food, it must be considered that for 18 percent of the dogs, the diet type indicated was 'B.A.R.F.' or 'partially B.A.R.F.'.

Illustration 12 **Illustration 13**





* The vertical axis reflects the percentage of recorded dogs to which the respective level of expenditure applies.

Increasingly, more money is being spent on routine **accessories** (toys, leash, collar, etc.) as well as for the initial equipment (basket, feeding bowl, car kennel, amongst other things) (see Ill. 12 and 13). For dogs that are perhaps used as rescue dogs or in dog sports, these expenditures are usually above average and can amount to far beyond 1,000 euro.

This turnover is increasingly through the **mail-order trade** (in particular online business) (see Table 3). Of the survey respondents, it would be **over 20 percent turnover from pet food and close to 20 percent from accessories**. However, in this survey, pet owners using the Internet often are somewhat overrepresented, so that nationwide in Germany a clearly lower mail-order proportion must be assumed.

Table 3: Mail-order trade (esp. online business) as a percentage of the expenditures on dog food and accessories		
Percentage of expenditures conducted through mail-order business	Share of dog owners	
	Dog food via mail-order	Accessories via mail-order
No mail-order business	62 %	58 %
1 – 19 %	3.6 %	4.5 %
20 – 39 %	4.7 %	8.6 %
40 – 59 %	5.2 %	13.1 %
60 – 79 %	2.2 %	3.5 %
80 – 100 %	22.3 %	12.3 %

Apart from pet food and accessories, **veterinary costs** are an expenditure item that is not to be underestimated, and which can easily add up to considerable amounts when dogs are older or chronically ill, or require surgery due to an accident or injury. For approx. 5 percent of the recorded dogs, more than 1,000 euro was spent on veterinary costs in the past year (see Ill. 14 and 15). This also included cases with veterinary costs of 2,000 up to 5,000 euro.

Illustration 14

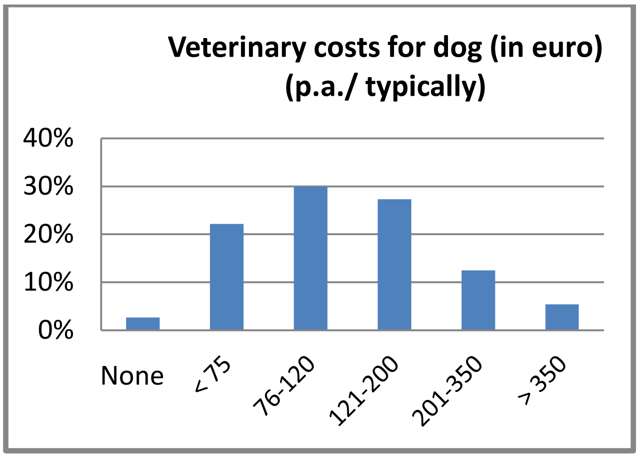
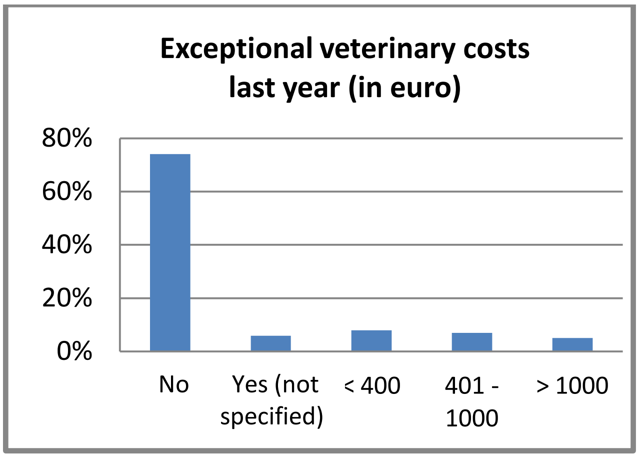


Illustration 15



* The vertical axis reflects the percentage of recorded dogs to which the respective level of expenditure applies.

(More than 32 percent of dog owners indicated that their **own doctor's visits** (not counting preventive care and dental treatments) have **decreased** since owning a dog.)

So far, approx. 15 percent of all respondents have taken out **pet health insurance** (see Ill. 16), but half of them only have a surgery policy.

Illustration 16

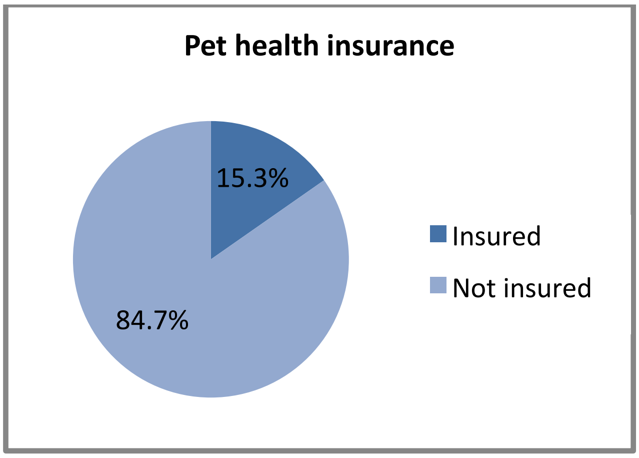
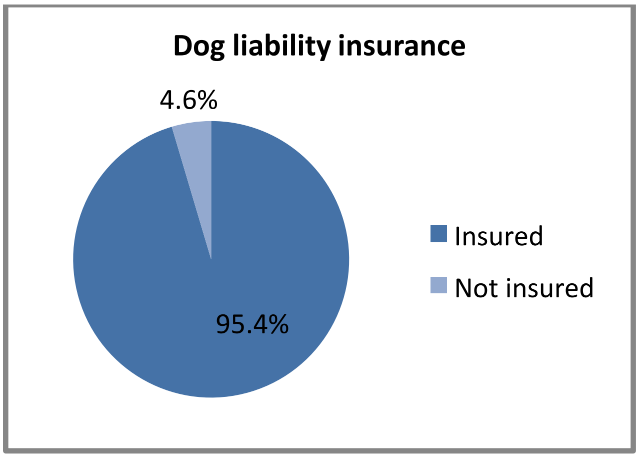


Illustration 17



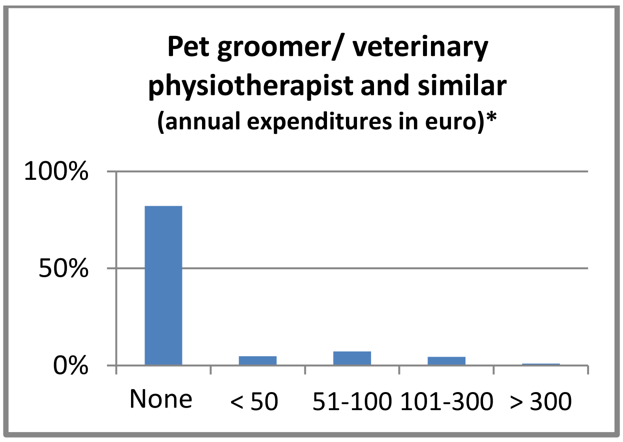
In contrast, about 95 percent of the interviewed dog owners have taken out **dog liability insurance** (see Ill. 17) - also in those German states where this insurance is not mandatory. (For example: it is mandatory in Niedersachsen, but not in Hessen and Nordrhein-Westfalen.)

If the dog owners are working/ have a job, then dog-sitter services are sometimes necessary, either done by private people or in dog day-care centers. Of the survey respondents, close to 10 percent of the dog owners regularly use dog-sitter services (see Ill. 4). If the dog is not taken along on vacation, full dog-care services are also required in this period of time - this is often covered by relatives/ friends, but also partly by animal boarding facilities/ pet shelters or so-called luxury '*Pfötchenhotels*'. However, about 80 percent of the respondents indicated that they take their dog along on vacation. But this results in additional costs for the dogs taken along in hotels or vacation homes. As a rule, they range from 5 to 20 euro per day.

Table 4: Expenditures for dog-care services			
Dog sitting		**Full-time care during vacation time**	
Monthly expenditures	**Share of dog owners**	**Annual expenditures**	**Share of dog owners**
None	90.5 %	None	88.3 %
Up to 40 euro	3.8 %	Up to 100 euro	2.3 %
41 – 70 euro	2 %	101 – 300 euro	7.9 %
71 – 150 euro	2.5 %	> 300 euro	1.5 %
More than 150 euro	1.2 %	Dog comes along	82.4 %

Further expenditures can result from **other services** for and in connection with the dog. This includes in particular the groomer, which is an inevitable service for some dog breeds (e.g. schnauzer or poodle), and for all dog owners not wanting to cut or trim the coat of their own pets. In recent times, veterinary physiotherapists, non-medical practitioners and homeopathic vets are increasingly consulted - in particular to help with chronically ill dogs. Close to 20% of respondents have expenditures for those types of canine services (see Ill. 18).

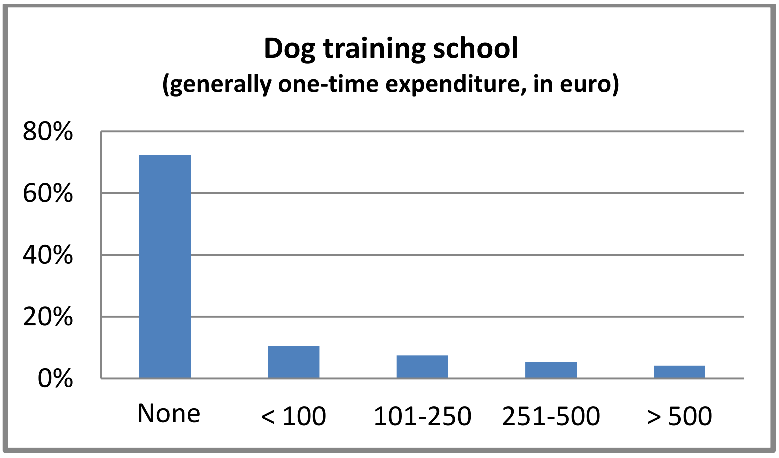
Illustration 18



* The vertical axis reflects the percentage of recorded dogs to which the respective level of expenditure applies.

Another growing area is in the expenditures for **dog obedience training**. Due to the public debate with respect to so-called fighting dogs (attack dogs), many German states have issued special dog laws, which under certain conditions, may also require dog owners to complete a practical test as evidence that they are competent in handling their own dogs. And pet owners with dogs classified as 'attack dogs' are frequently required to provide evidence of having completed a companion dog test before the requirement on using a leash and muzzle is lifted. For this reason, many dog owners meanwhile complete a professional course with a dog trainer at least once during the dog's lifetime (see Ill. 19). In difficult cases, the expenditures can quickly add up to an amount of 1,000 to 1,500 euro.

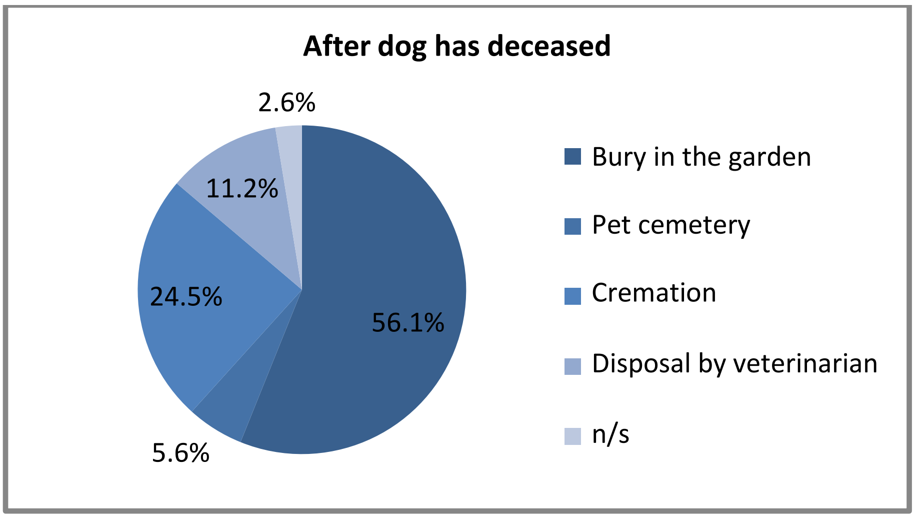
Illustration 19



* The vertical axis reflects the percentage of recorded dogs to which the respective level of expenditure applies.

Finally, expenditures may also incur when the dog dies - depending on the available options for a **pet funeral** (see Ill. 20). About 56 percent of the surveyed pet owners indicated they would bury their dog in the garden. The share of dogs being cremated is close to 25 percent in this survey, suggesting a growing sector for animal crematoria. With approx. 11 percent, pet cemeteries play a subordinate role.

Illustration 20



C) Results for cat ownership

For the purpose of the survey, distinctions have been made between purebred cats and 'regular' domestic cats (see Ill. 21) on one hand, and on the other hand, between outdoor and purely indoor cats (see Ill. 22).

Illustration 21

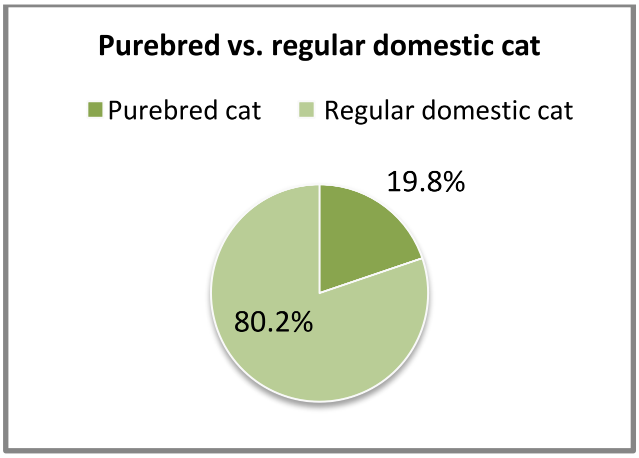
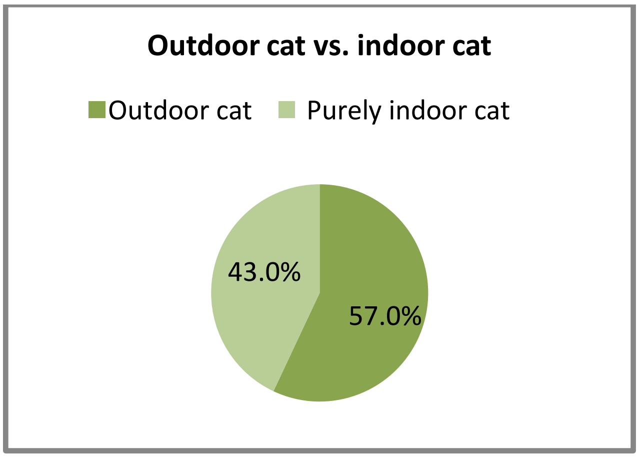
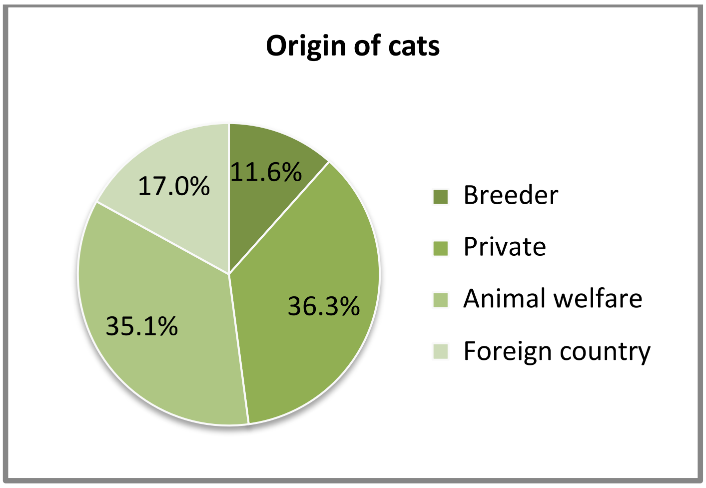


Illustration 22



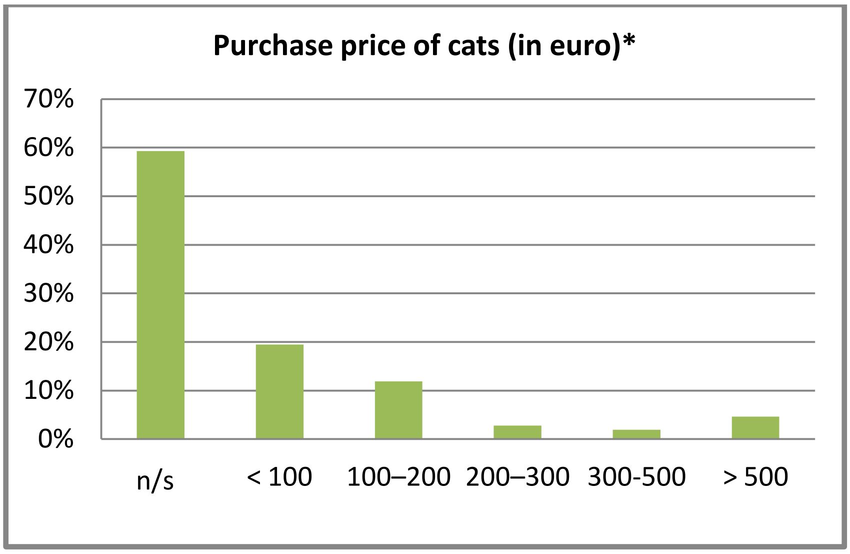
Almost 20 percent of the recorded cats were specified as **purebred cats**, whereby this percentage most likely does not only include cats with a confirmed bloodline of a recognized breeding society linking it to a specific breed, but partly also those 'nearly' purebred cats or those from non-registered breeders specified as purebred. Nationwide, the percentage is probably even lower in Germany, because naturally only cats that have undisputed 'owners' are included in this survey. In addition, there are many other cats that are living largely outdoors (especially in rural areas) and are cared for only sporadically. This group rarely includes purebred cats. Accordingly, the percentage of **outdoor cats** is altogether probably even a little higher than the 57 percent determined here.

Illustration 23



When asked about the **cat's origin** (see Ill. 23), it becomes obvious that barely 12 percent have been acquired directly from a breeder, and as such presumably are purebred cats. Private sources, but also animal welfare organizations, play the biggest role in terms of origin.

Illustration 24

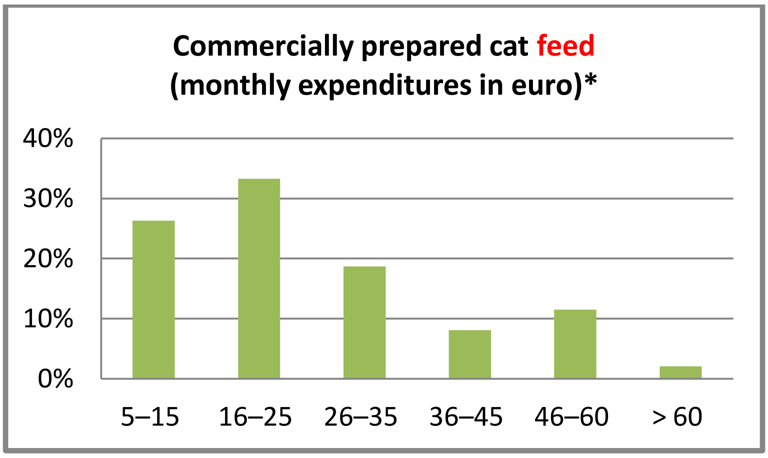


* The vertical axis reflects the percentage of recorded cats to which the respective level of expenditure applies.

For cat ownership, the **purchase price** plays in minor role (see Ill. 24). Most cats are obtained at no charge (cats as gifts, stray cats). When obtaining cats through an animal welfare organization, there is usually just a nominal charge to be paid (from less than 100 up to 200 euro). However, clearly in excess over 500 euro or even up to 2,000 euro is charged for purebred cats.

Concerning the **running costs of cat ownership**, the following data was provided:

Illustration 25



* The vertical axis reflects the percentage of recorded cats to which the respective level of expenditure applies.

The money that responding cat owners spend each month on **commercially prepared cat food** varies greatly (see Ill. 25) - but on average is approx. 25 euro. However, cat owners in rural areas (which are underrepresented in this survey) presumably spend a lot less.

Home-prepared cat food plays a minor role among cat owners (see Ill. 26). Only one quarter of the surveyed cat owners occasionally feed their cats other food that is not declared as cat food (e.g. canned fish).

Illustration 26

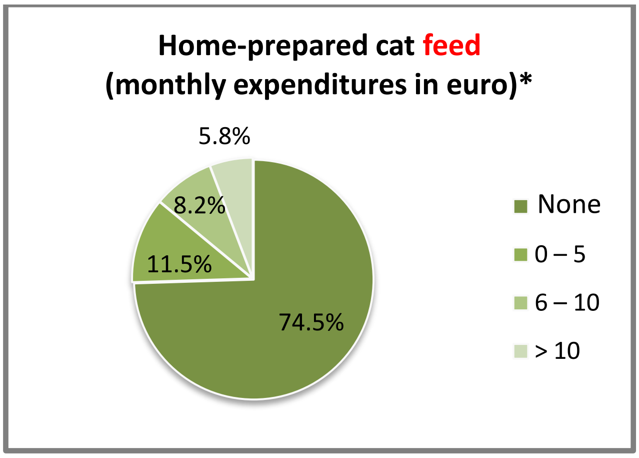
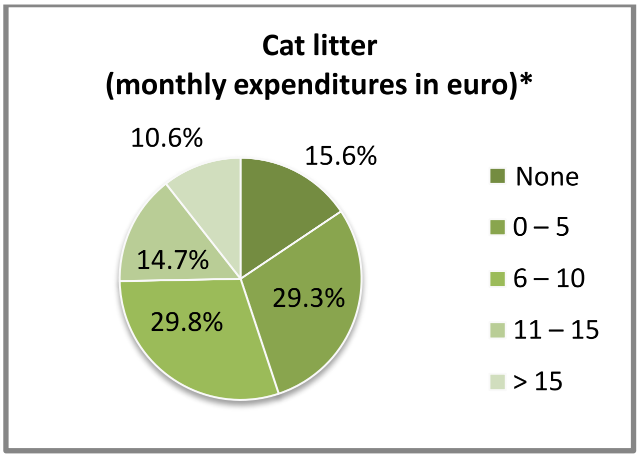


Illustration 27



Another running expense item in cat ownership is cat litter (see Ill. 27). As a rule, from 5 to 10 euro is spent on litter every month.

Accessories (esp. toys) are usually not a major expense item in cat ownership (see Ill. 28). For **initial equipment** (cat basket, scratching tree, etc.) from 50 to 100 euro is calculated on average (see Ill. 29). But there are also cat owners who spend up to 1,000 euro on this - in particular if they have several cats.

Illustration 28

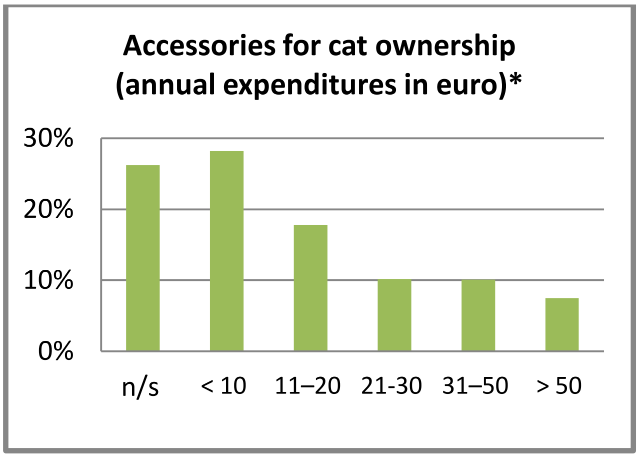
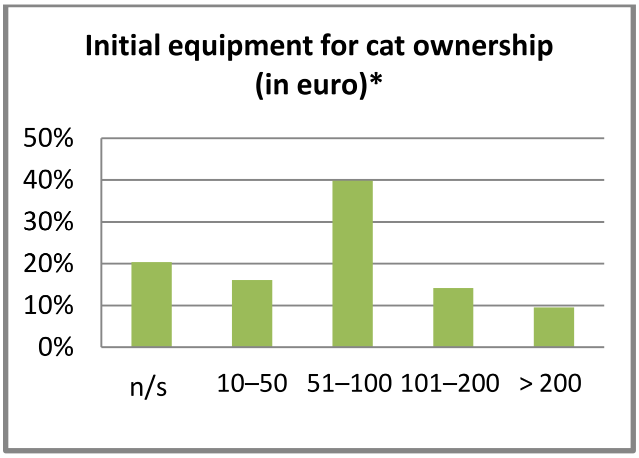


Illustration 29



* The vertical axis reflects the percentage of recorded cats, to which the respective level of expenditure applies.

Here also, the **mail-order trade** (especially the online business) seems to play an increasing role (see Table 5), but the percentage is slightly lower than for dog food and dog accessories. Moreover, the mail-order trade share is higher in the **accessory category (almost 18 percent of the turnover) than in the cat food category (approx. 16.5 percent of the turnover)**. Here again, pet owners frequently using the Internet are somewhat overrepresented, so that nationwide in Germany a clearly lower mail-order share must be assumed.

Table 5: Mail-order trade (esp. online business) as a percentage of expenditures on cat food and accessories		
Percentage of expenditures conducted through mail-order business	**Share of cat owners**	
	Cat food via mail-order	**Accessories via mail-order**
No mail-order business	72 %	64.8 %
1 – 19 %	2.7 %	4.5 %
20 – 39 %	3.7 %	5.7 %
40 – 59 %	2.7 %	7.7 %
60 – 79 %	2.2 %	3.2 %
80 – 100 %	16.7 %	14.1 %

Apart from pet food and accessories, **veterinary costs** are an expenditure item that is not to be underestimated, and which can easily add up to considerable amounts when cats are older or chronically ill, or require surgery due to an accident or injury (see Ill. 30 and 31). As a rule, 50 to 100 euro is spent on this per year. Of the (few) respondents indicating unusually high veterinary costs of over 600 euro, there were some even with expenditures of 1,000 to 2,000 euro.

Illustration 30

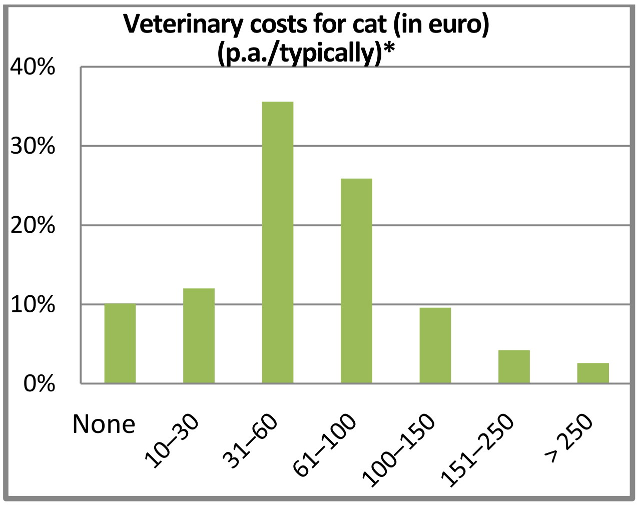
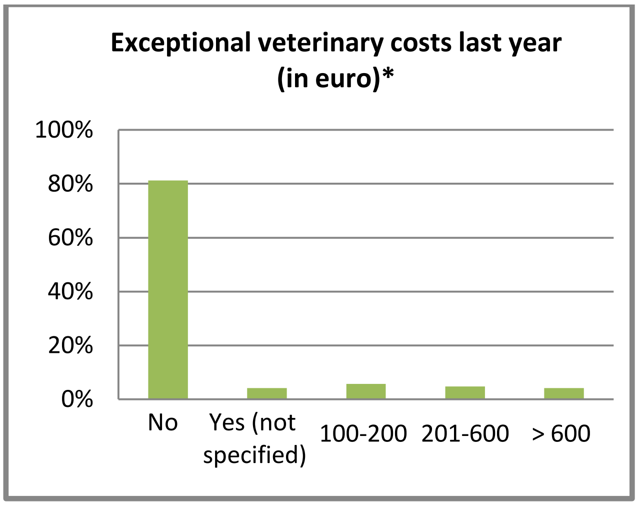


Illustration 31

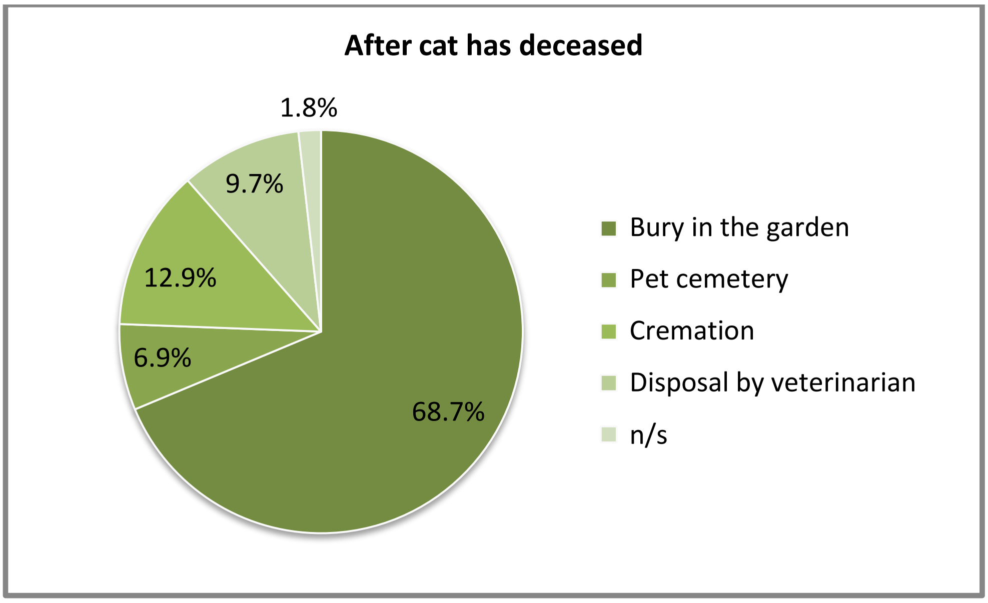


* The vertical axis reflects the percentage of recorded cats, to which the respective level of expenditure applies.

So far, only approx. 6 percent of all responding cat owners have taken out **pet health insurance**. Most often, these were cat owners with several cats.

Finally, expenditures may also incur when the cat dies - depending on the available options for a **pet funeral** (see Ill. 32). Almost 70 percent of the surveyed cat owners indicated they would bury their cat in the garden. The share of cats being cremated is close to 13% in this survey. With not quite 7 percent, pet cemeteries play a subordinate role.

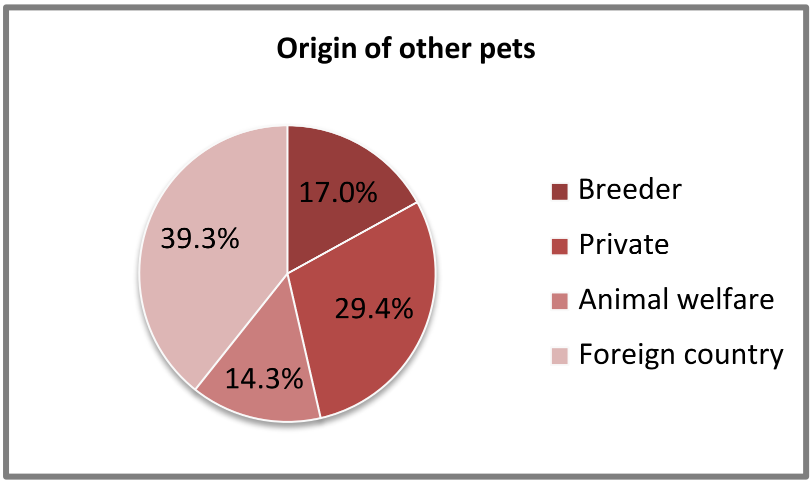
Illustration 32



D) Results for other pets

As for the other pets, a differentiation is made between ornamental birds, ornamental fish, terrarium animals (turtles, bearded dragons, axolotls, geckos, snakes, iguanas, among others) and small animals (pygmy rabbits, guinea pigs, hamsters, rats, mice, degus, cururos, ferrets, etc.). They are primarily purchased in a pet shop or directly from the breeder (see Ill. 33). Animal welfare organizations offer primarily rodents.

Illustration 33



The **pet food expenditure** for other pets is rather small. In many cases, fresh food is fed either additionally or sometimes even exclusively. The collected expenditure data does not necessarily refer to only a single animal, but rather reflects the total spending for all animals of one species, incurred by each surveyed small animal owner. (As more often than not, several small animals of the same species are owned.) Ill. 34 and 35 shows the expenditures for **commercially prepared pet food** and **fresh food** of all surveyed owners of other pets together.

Illustration 34

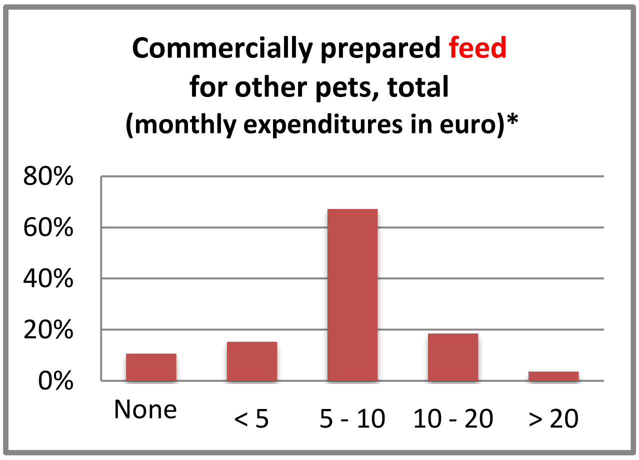
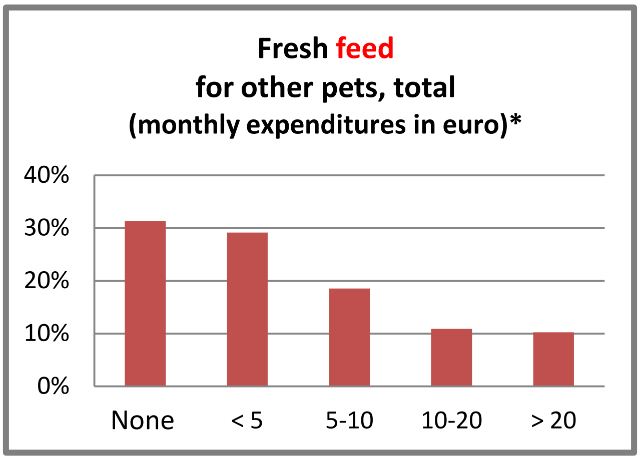


Illustration 35



* The vertical axis reflects the percentage of recorded small animals to which the respective level of expenditure applies.

Thus, in more than two thirds of the cases, less than 10 euro per month is spent on commercially prepared pet food, and on average less than 5 euro on fresh food for other pets.

Ill. 36 to 43 show the expenditures for commercially prepared pet food and fresh food of all individual animal species (ornamental birds, ornamental fish, reptiles, small animals).

Illustration 36

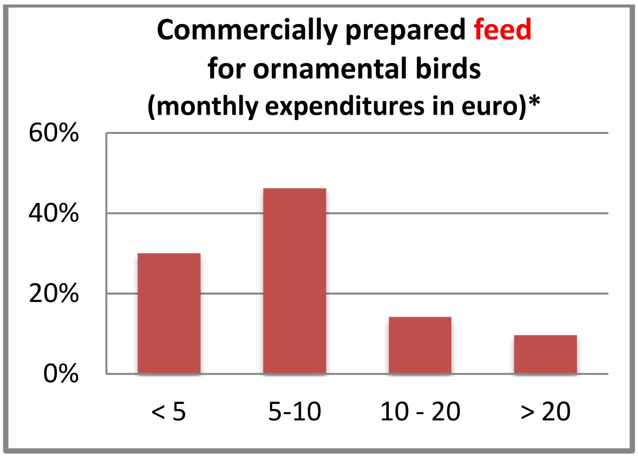


Illustration 37

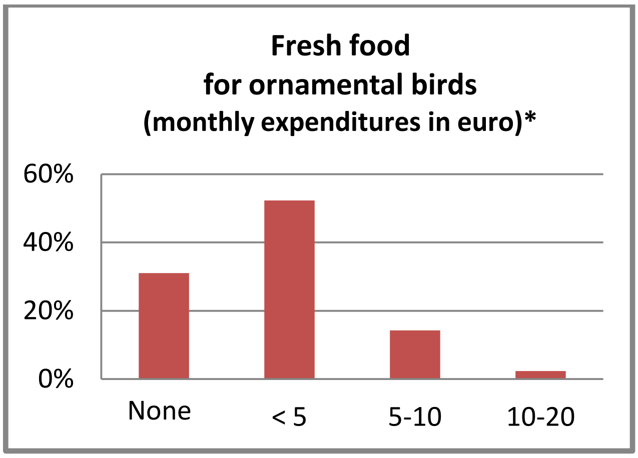


Illustration 38

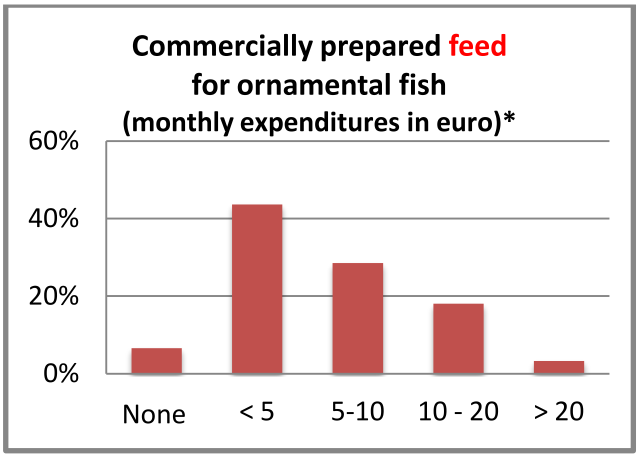


Illustration 39

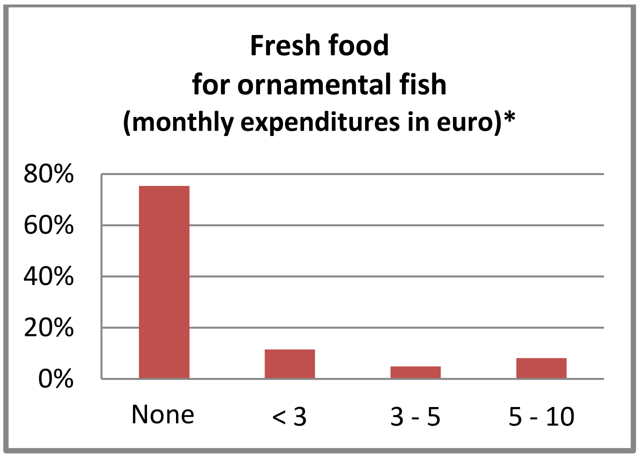


Illustration 40

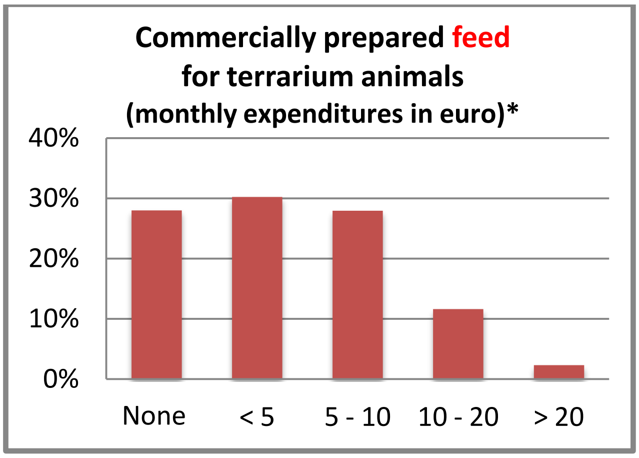
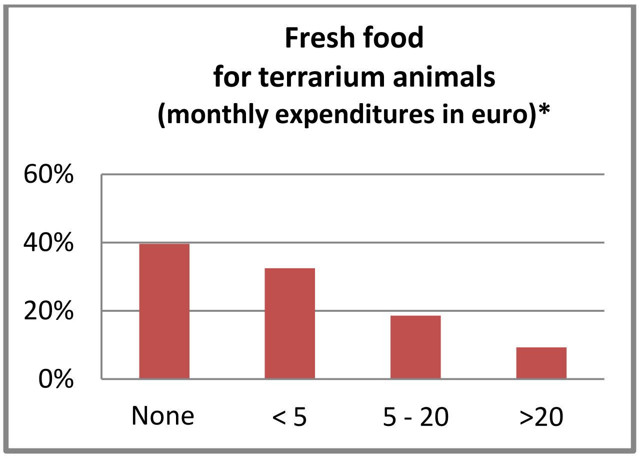


Illustration 41



* The vertical axis reflects the percentage of recorded small animals to which the respective level of expenditure applies.

Illustration 42

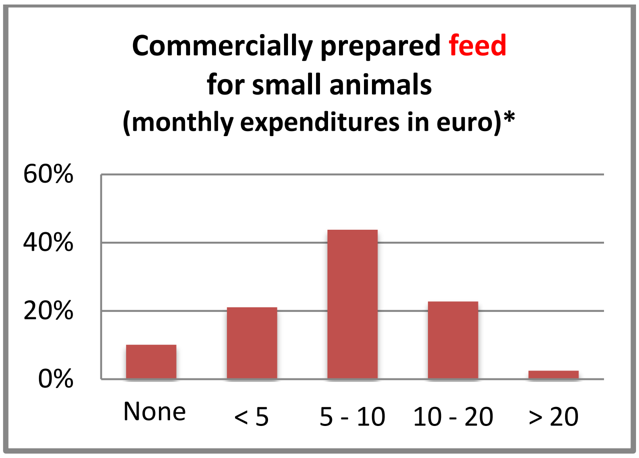
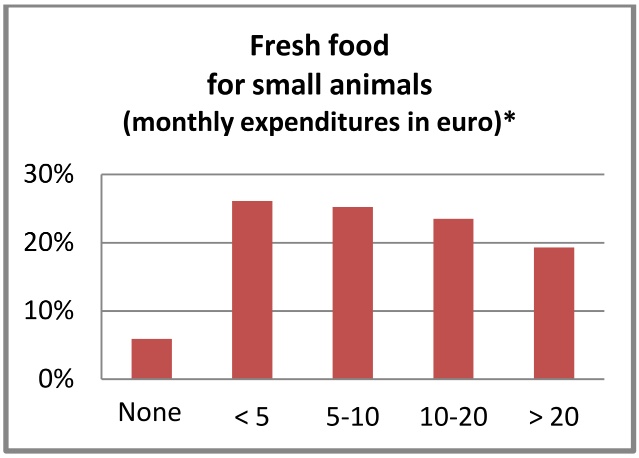


Illustration 43



* The vertical axis reflects the percentage of recorded small animals, to which the respective level of expenditure applies.

As for other pets, fresh food plays a similarly large role as commercially prepared pet food.

Moreover, the **initial equipment** (cage, aquarium, terrarium, etc.) and **accessories** (e.g. aquarium filter, litter, claw & coat care products for rodents, sand and toys for birds, etc.) are more important in terms of expenditures than the running cost for pet food (see Ill. 44 and 45).

Illustration 44

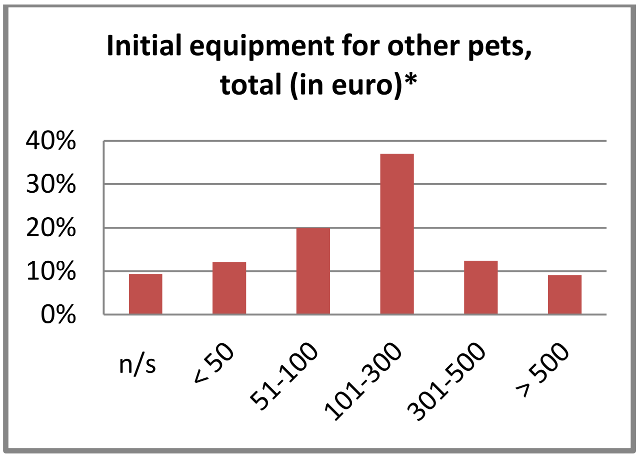
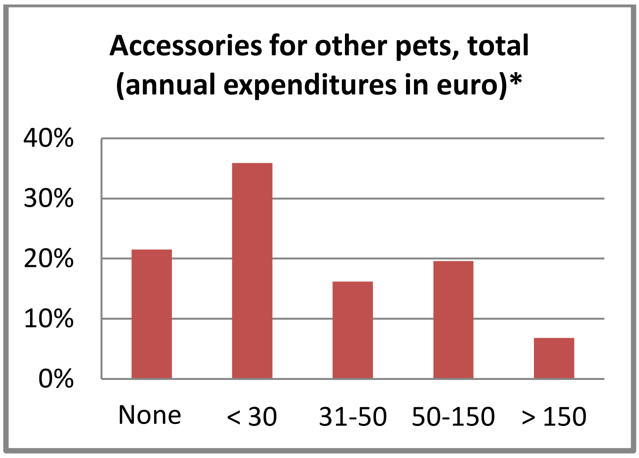


Illustration 45



* The vertical axis reflects the percentage of recorded small animals to which the respective level of expenditure applies.

On average, 150 to 200 euro is spent on initial equipment for other pets across all surveyed pet owners; however, this can vary greatly depending on the individual animal species (see Ill. 46 to 53). For aquaria and terrariums, it is more than 300 euro for one third of the owners, and in many cases even up to 1,000 euro and more. An average of 30 to 50 euro is spent on accessories, whereby the range here is also relatively broad. Frequently, no indication at all was made of expenditures on accessories for fish and terrarium animals.

Illustration 46

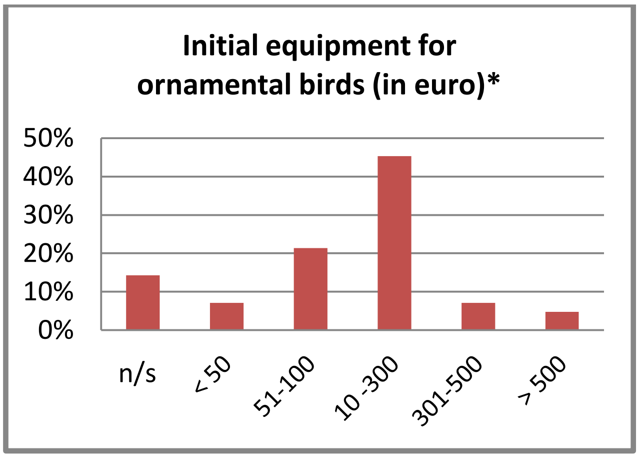


Illustration 47

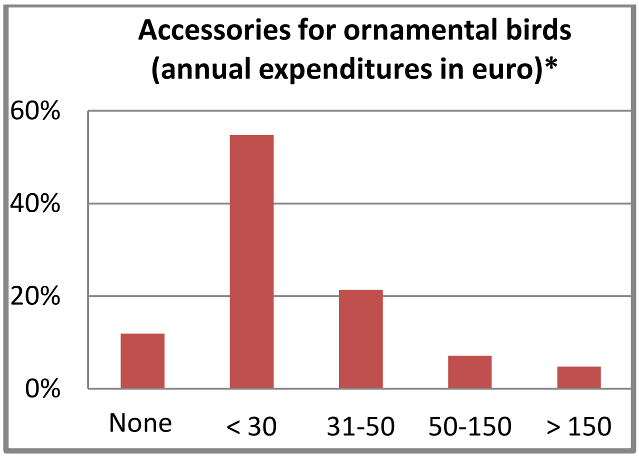


Illustration 48

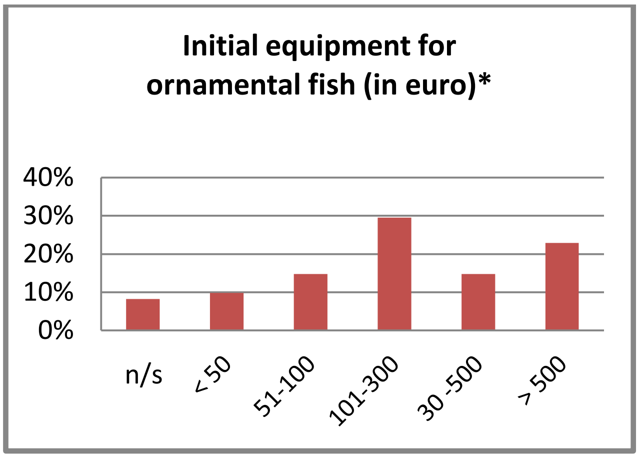


Illustration 49

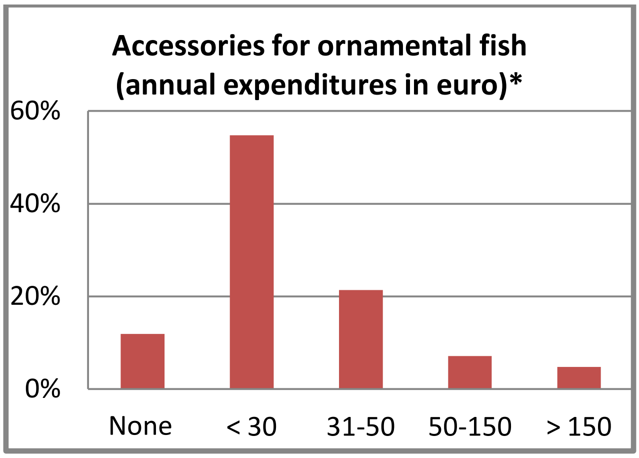


Illustration 50

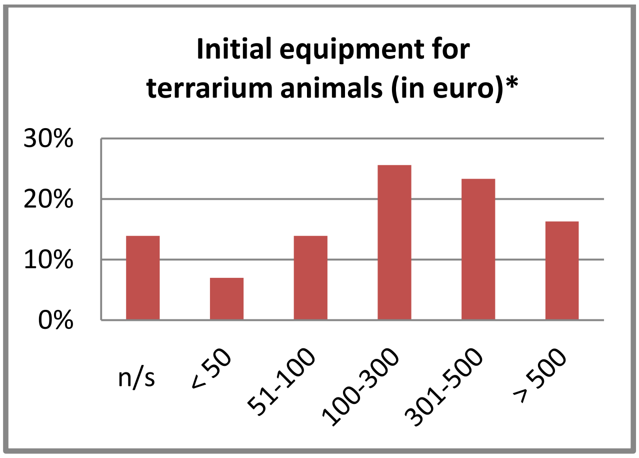
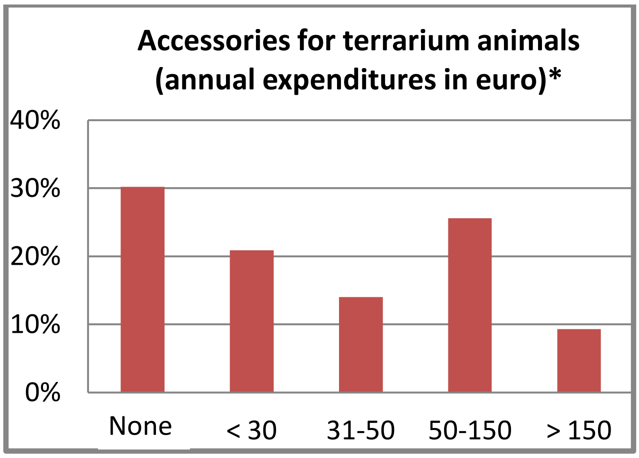


Illustration 51



* The vertical axis reflects the percentage of recorded small animals to which the respective level of expenditure applies.

Illustration 52

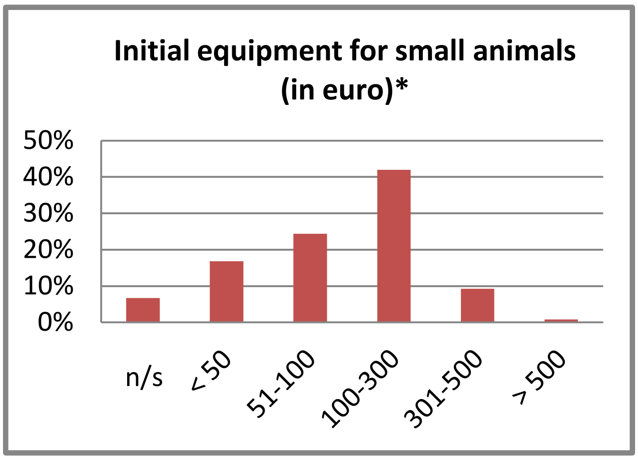
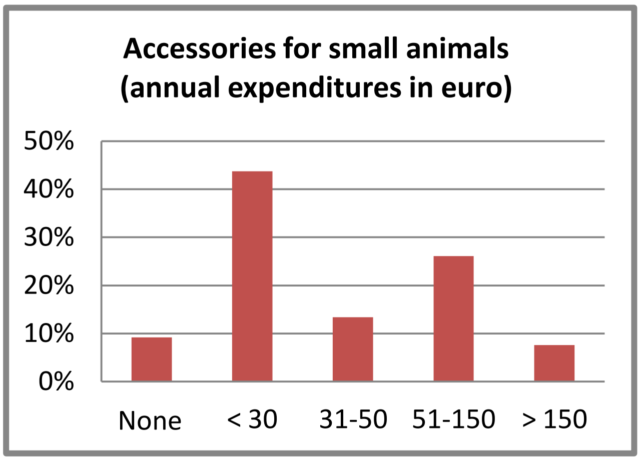


Illustration 53



* The vertical axis reflects the percentage of recorded small animals, to which the respective level of expenditure applies.

A substantial amount of the pet food and accessories for other pets is meanwhile also being acquired through the **mail-order trade** (especially online business) (see Table 6); however, somewhat less than for dogs and cats - and is more for **accessories (approx. 17 percent of the turnover) than pet food (approx. 13.5 percent of the turnover)**. Here again, pet owners frequently using the Internet are somewhat overrepresented, so that nationwide in Germany a clearly lower mail-order share must be assumed.

Table 6: Mail-order trade (esp. online business) as a percentage of expenditures on pet food and accessories for other pets

Percentage of expenditures conducted through mail-order business	Share of pet owners	
	Pet food via mail-order	Accessories via mail-order
No mail-order business	77 %	69.9 %
1 – 19 %	1.4 %	0.9 %
20 – 39 %	2.9 %	5.7 %
40 – 59 %	3.8 %	5.4 %
60 – 79 %	2.4 %	3.3 %
80 – 100 %	12.5 %	14.8 %

****** End of pet owner survey evaluation ******

Chapter 11:
Executive Summary on the Economic Significance of Pet Ownership in Germany

Currently, Germany has an estimated...

- 6.9 million dogs
- 11.5 million cats
- 6.1 million small animals (pygmy rabbits, guinea pigs, hamsters, etc.)
- 3.4 million ornamental birds
- 2 million aquaria
- 1.7 million garden ponds (with fish)
- 0.8 million terraria

In relation to the human population in Germany compared to overall Europe, we have...

- a low 'dog density',
- an average 'cat density'
- above average 'ownership of small animals'

The **economic significance** of pet ownership (from expenditures of pet owners) comprises a variety of different aspects:

- **Just under 3.75 billion euro** is spent on **pet food** (commercially and home prepared, bricks & mortar as well as online business), and of that, over 90 percent is on dogs and cats.
- **Another 1.05 billion euro** is spent on **pet accessories,** thereof about 20 percent on dogs, more than 45 percent on cats and close to 35 percent for other pets (ornamental birds & fish and reptiles, small animals).
- Just by covering the **basic animal needs** (food and accessories), pet ownership in Germany alone generates a turnover of approx. **4.8 billion euro**, whereas dog ownership accounts for 1.8 billion and cat ownership for 2.25 billion.
- **Pet health** currently accounts for approx. **2.1 billion euro**, of that a little more than half can be attributed to dog ownership, more than one third to cat ownership and the remainder to other pets.
- Expenditures also arise from many types of service directed at and in connection with pets:
    - **pet breeding** (and the club activities and shows related to this) is an estimated amount of **560 million euro**, thereof two thirds related to dogs, about 10 percent to cats and more than 20 percent to other pet.

- **animal insurance** (dog owner liability and dog/ cat health insurance) is estimated at **approx. 450 million euro**
- **boarding services** estimated at **65-70 million euro**
- **pet funerals** estimated at **40 million euro**
- **dog obedience schools** estimated at **75 million euro**
- **dog grooming services** estimated at **65 million euro**
- **dog tax (approx. 300 million euro)**
- **pet shelters (approx. 170 million euro)**

90 percent of these expenditures can be attributed to dog ownership.

- Further expenditures/ turnover are resulting from:
  - **animal books, animal magazines and TV shows** (approx. 135 million euro total)
  - **cost of electricity for aquaria/ terrariums**
  - **income from the tourism industry (dogs traveling with owners)**
  - **additional costs for cleaning, repairs and changes in house, garden, car**
  - **private dog/ cat sitting**
  - **and much more...**

Another approx. 520 million euro can be attributed to these categories alone.

Taking all economic sectors concerned into account, **pet ownership in Germany** results in expenditures and thus **an overall economic demand of approx. 9.1 billion euro**.

This corresponds to about **0.32 percent of our gross domestic product**, sustaining approx. **185,000 - 200,000 jobs**.

More than 50 percent can be attributed to **dog ownership**, over 35 percent to **cat ownership** and less than 15 percent to **other pets**.

Of the other pets, small animal ownership and aquaristics/ terraristics generally play about an equal role, whereas ornamental bird ownership has the smallest overall economic effect.

However, apart from this measurable creation of value, there are still economic and **social returns** that are not fully accounted for in the gross domestic product, such as the services of 'working dogs' or the impact of pet ownership on health and quality of life:

- **Police dogs, rescue dogs, guide dogs, assistance dogs, therapy dogs, etc.** create **added value** that is actually much higher than what may be included in the official gross domestic product, which is at best the cost of pet ownership.
- Many studies show that pet ownership has a **positive influence on the physical and psychological health** of the pet owners.
- This is also reflected in **less spending for the medical care of pet owners** compared to people without pets.
- As such, pet ownership could result in **savings of 1.5 to 3 billion euro for the German health system**.

Our survey on the spending behavior of pet owners completes the picture. Here, some tendencies of spending behavior become apparent; however, it must be emphasized that the survey **is not fully representative**. For example, due to the voluntary nature of the survey, which was partly completed online and supported by Internet forums, people who frequently use the Internet, plus are very engaged in animal welfare and thus very active in forums, are overrepresented. People whose pets clearly play a more subordinate role, and who are therefore more likely to spend less on their animal, are altogether rather underrepresented.

Perspectives of the economic significance of pet ownership in Germany

- Considering the demographic developments in Germany, the number of pets will probably not continue to rise in the foreseeable future. Also, there seems to be a downward trend in ornamental birds, whereas the demand for exotic animals is still increasing.
- There is a growing acceptance of cost-intensive treatments (intensive care), which follows the same trends in human medicine. Related to this, surgery insurance is also on the rise.
- In the future, the demand for dog owner liability insurance could increase, as this type of insurance may become mandatory in even more German states (*Bundesländer*).
- The number of commercial pet funerals, in particular cremations, will continue to rise.
- There is clearly a decrease in the ownership of pedigree dogs bred in Germany. Pedigree dogs are being imported at a growing rate, but frequently also mixed breeds from other countries that have been kept in poor conditions.
- The need for dog obedience schools will not diminish - also in view of various dog regulations along with the requirement for a certificate of handling competence.
- Dogs are more often taken along on vacations.
- The significance that pets have on the health of humans is increasingly being recognized and applied in various therapies.

The greatness of a *nation* and its *moral* progress can be judged

by the way its *animals* are treated.

Mahatma Gandhi